TD-MXG9BK

JVC

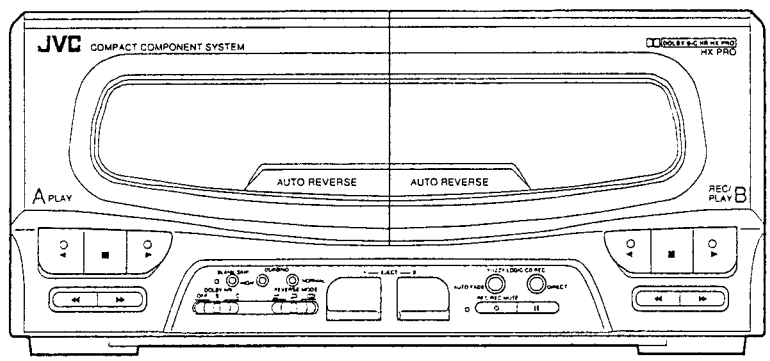
JVC -01576

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

CA-MXG9BK/XT-MXG9BK

(Unit No. TD-MXG9BK)



Note

This manual is for one part of the titled model consisting of the plural units as detailed.

Unit No Consisted	*Part of Model*	*Manual No*
TD-MXG9BK	*CASSETTE DECK*	*20437*
RX-MXG9BK	*TUNER-AMPLIFIER*	*20434*
SE-MXG9BK	*S.E.A-GRAPHIC EQUALIZER*	*20435*
XL-MXG9BK	*COMPACT DISC PLAYER*	*20436*

** For instruction manual, packing materials and accessories, please refer to the RX-MXG9BK (S.M.No 20434).*

** RX-MXG9BK is needed (for power supply etc.) when servicing.*

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No. 20437
June 1993

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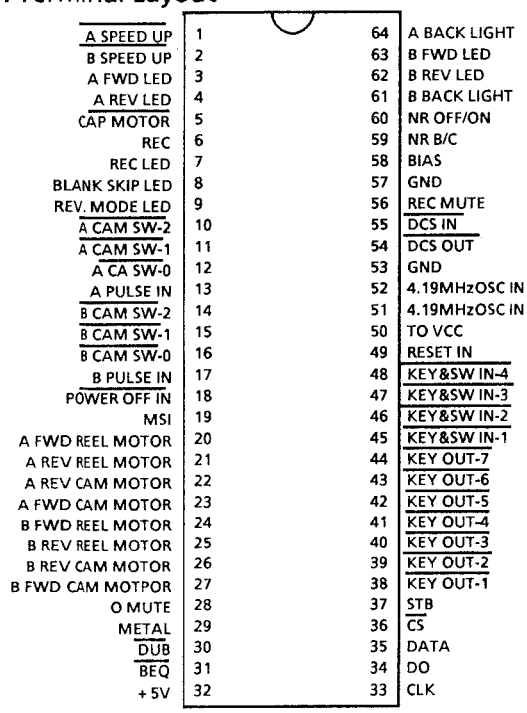
Description of Major LSIs

■ HD614081SD46(IC401) : System controller

1. Terminal Layout



2. Key Matrix

	KEY&SW-1 (Pin45)	KEY&SW-2 (Pin46)	KEY&SW-3 (Pin47)	KEY&SW-4 (Pin48)
KEY OUT 1 (Pin38)	A ◀	A ◀◀	A ▶▶	A ▶
KEY OUT 2 (Pin39)	B ◀	B ◀◀	B ▶▶	B ▶
KEY OUT 3 (Pin40)	A ■	B ■	B ●	B ❚❚
KEY OUT 4 (Pin41)	A▶▶B	A▶B	—	BLANK SKIP
KEY OUT 5 (Pin42)	FUZZY DIRECT	FUZZY AUTO	DOLBY B	DOLBY C
KEY OUT 6 (Pin43)	B PACK	REV REC	FWD REC	A PACK
KEY OUT 7 (PIn44)	REV.MODE ⟲	B CrO2	B METAL	REV.MODE ⟲⟳

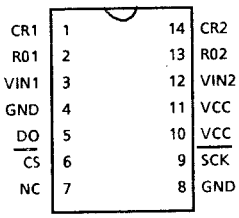
3. Terminal Description

Pin	Symbol	I/O	Description	Pin	Symbol	I/O	Description
1	A SPEED UP	O	A deck speed control output	33	CLK	O	Clock for data transfer
2	B SPEED UP	O	B deck speed control output	34	DO	O	Data output
3	A FWD LED	O	Indication signal for A forward LED	35	DATA	O	Data output
4	A REV LED	O	Indication signal for A reverse LED	36	CS	O	Chip select signal
5	CAP MOTOR	O	Capstan motor control signal	37	STB	O	Strobe signal output
6	REC	O	Recording control signal (H : REC)	38	KO 1	O	Key matrix output
7	B REC LED	O	Indication signal for recording	39	KO 2	O	〃
8	BLA. SKIP LED	O	Indication signal for Blank skip	40	KO 3	O	〃
9		--	Not used	41	KO 4	O	〃
10	A CAM SW 2	I	Input terminal for mech. and head status	42	KO 5	O	〃
11	A CAM SW 1	I	〃	43	KO 6	O	〃
12	A CAM SW 0	I	〃	44	KO 7	O	〃
13	A PULSE IN	I	Pulse signal input from Reel	45	KI 1	I	Key matrix input
14	B CAM SW 2	I	Input terminal for mech. and head status	46	KI 2	I	〃
15	B CAM SW 1	I	〃	47	KI 3	I	〃
16	B CAM SW 0	I	〃	48	KI 4	I	〃
17	B PULSE	I	Pulse signal input from Reel	49	RESET	I	Reset signal input
18	POW. OFF IN	I	Power ON/OFF signal input	50	TO VCC	--	Connected to +5V
19	MS IN	I	Blank detect terminal for music scan	51	4.19MHzOSC	I/O	Clock oscillation terminal
20	AFWD REEL	O	Reel motor control signal	52	4.19MHzOSC	I/O	〃
21	A REV REEL	O	Reel motor control signal	53	GND	--	Ground
22	A REV CAM	O	Cam motor control signal	54	DCS OUT	O	Compulink signal output
23	AFWD CAM	O	Cam motor control signal	55	DCS IN	I	Compulink signal input
24	B FWD REEL	O	Reel motor control signal	56	REC. MUTE	O	Recording mute signal output
25	B REV REEL	O	Reel motor control signal	57	GND	--	Ground
26	B REV CAM	O	Cam motor control signal	58	BIAS	O	ON / OFF signal for bias circuit
27	B FWD CAM	O	Cam motor control signal	59	NR B/C	O	NR B / C switching signal
28	OMUTE	O	Play muting control	60	NR OFF/ON	O	NR ON/OFF signal output
29	METAL	O	Recording bias control for METAL tape	61		--	Not used
30	DUB	O	High speed dubbing control	62	B REV LED	O	Indication signal for B reverse
31	BEQ	O	Equalizer switching signal	63	B FWD LED	O	Indication signal for B forward
32	+5V	--	Power supply	64		--	Not used

Internal Block Diagram of Other ICs

■ M62302P(IC202) : A/D converter for AV level

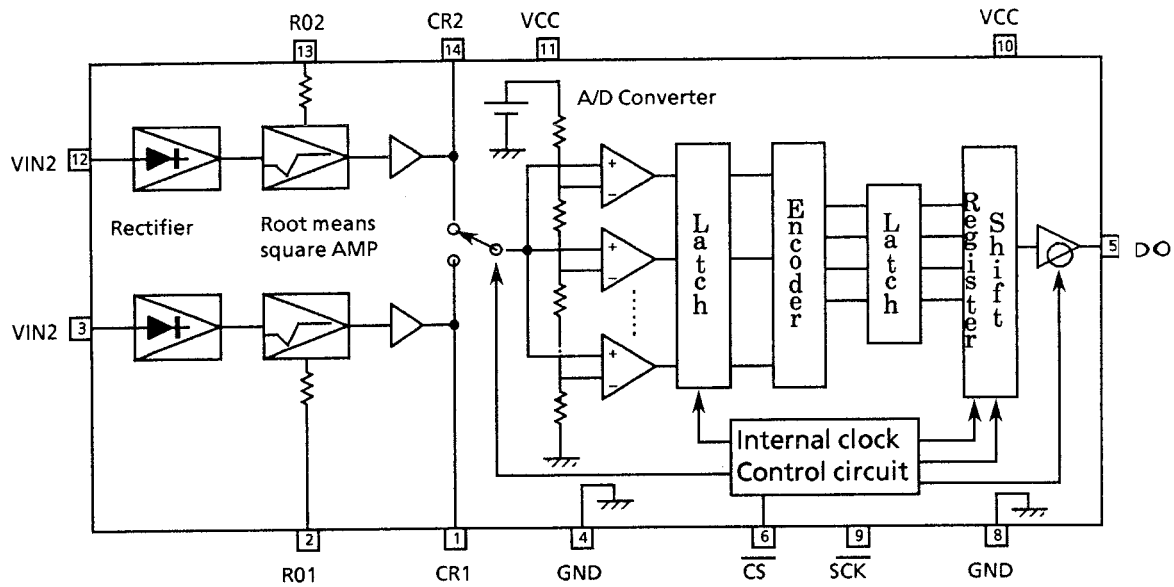
1. Terminal Layout



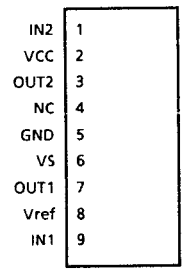
2.Terminal Description

Pin No.	Symbol	I/O	Description
1 14	CR1 CR2	--	This is a terminal to determine the response of the output.
2 13	R01 R02	--	This is a terminal to determine the response of the output.
3 12	VIN1 VIN2	I	Analog signal input terminal
4 8	GND	--	Ground
5	DO	O	Digital ooutput terminal
6	$\overline{CS}$	I	Chip select terminal DO terminal is enable when this terminal is "L".
9	$\overline{SCK}$	I	Clock signal input The accuracy of the A/D conversion depends on this clock speed.
10 11	VCC	—	+5V

3. Block Diagram



■ TA8409S (IC451~454) : DC motor driver

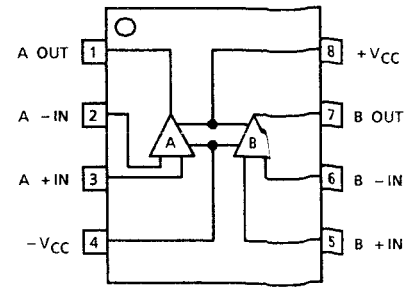


Function

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	OPEN
0	1	L	H	CLOSE
1	1	L	L	BRAKE

∞ : High impedance

■ VC4580LD (IC111,112) : Dual OP Amp.



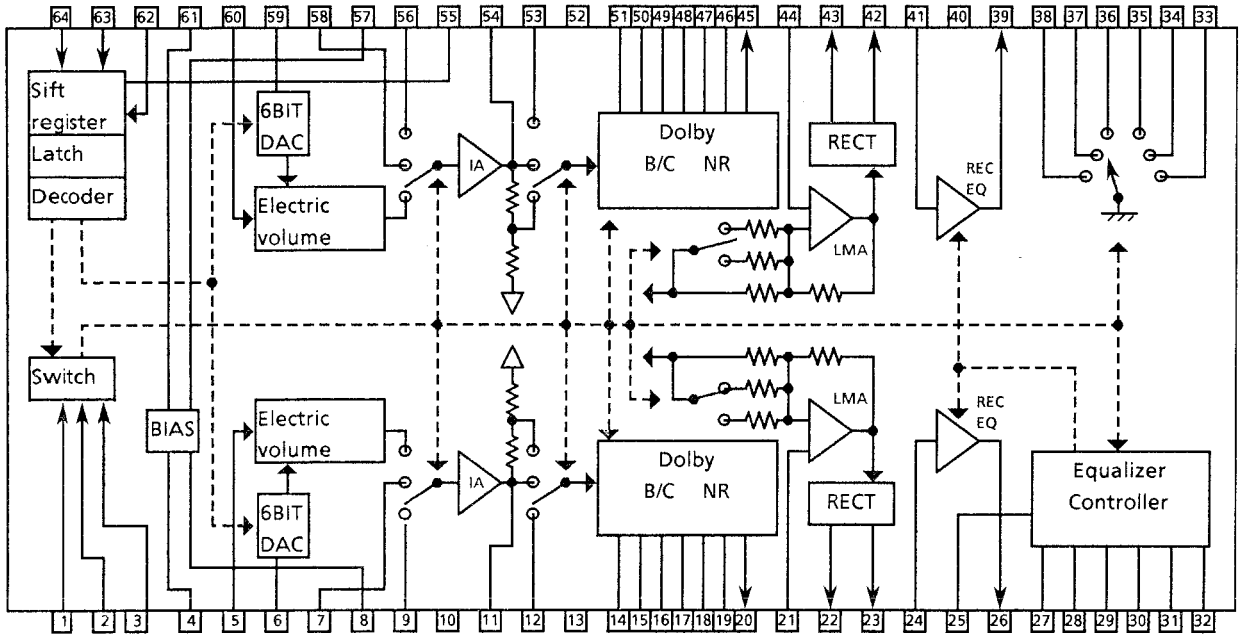
■ HA12155NT (IC201) : Signal processor

Function

REC Equalizer
Dolby B/C
Electric Volume
Level meter

Description

1) REC level automatic control
2) The signal which is not decoded is output from REC OUT during Playback.
3) Standard/high speed, Normal/CrO2/METAL switchng
4) NR-ON/OFF,Dolby B/C,switching

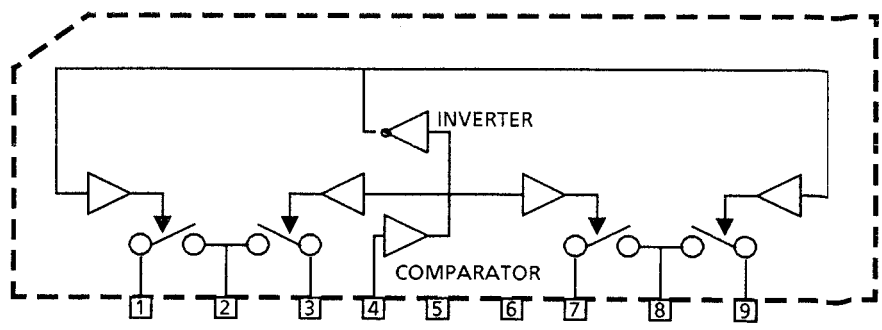


PinNO	Function	PinNO	Function	PinNO	Function
1	NR ON/OFF input	10	Connected to + 5V	25	EQ Constant current input
2	NR B/C switching	14,51	Playback signal output	26,39	Recording signal input
3	Not used	15,50	Spectram slanting AMP	27~32	EQ parameter current input
4	Power supply	16,49	Spectram slanting AMP	33~38	EQ parameter select
5,60	Recording signal input	20,45	Output for REC equalizer	40,61	Ground
6,59	Capacitors are connected	21,44	Not used	55	Digital ground
7,58	Deck A playback signal input	22,43	Conected to capacitor	57	Current input for Dolby NR
8	Not used	23,42	Music scan output	62	Strobe signal input
9,56	Deck B playback signal input	24,41	Equalizer input	63	Clock input
11,12,13 54,53,52	Not used	17,18,19 48,47,46	Not used	64	Data input

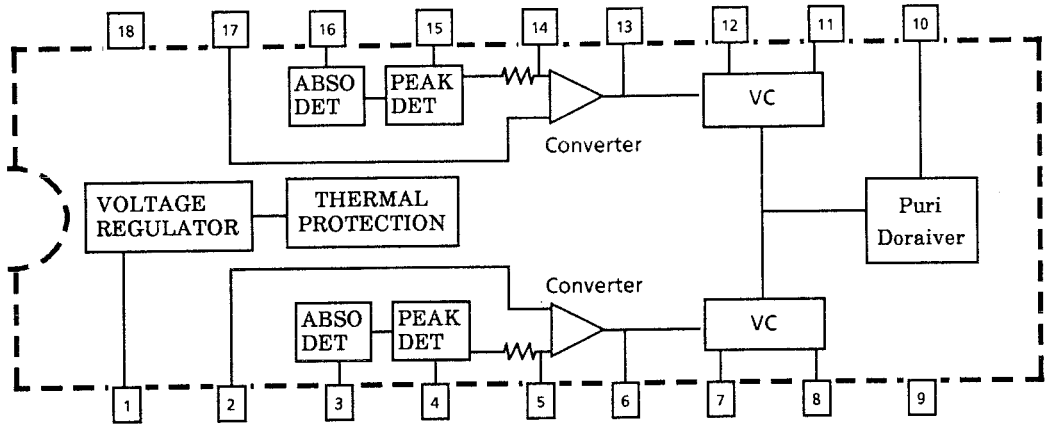
■ μPC1330 HA (IC101) : HEAD SWITCH

Function

	4pin
PB	L
REC	H



■ μPC1297CA (IC301) : Dolby HX PRO System IC



Disassembly Procedures

■ Top cover removal

1. Remove the screws fastening both sides of the Top cover and rear side.
2. Remove the Top cover spreding both sides and lifting the rear up.

■ Front panel block removal

1. Remove the Top cover.
2. Disconnect the connectors P101,P102,J401,J402,J403.
3. Remove the screw Ⓑ on the bottom .
4. Release the 3 hooks Ⓐ and remove the front panel block.

■ Cassette mechanism block removal

1. Remove the front panel block.
2. Disconnect the connectors J408,J409.
3. Remove the 8 blue colored screws Ⓒ Ⓓ fixing the mechanism.
4. Push the eject button and remove the cassette mechanism block.

NOTE
The cassette mechanism is grounded through the bottom cover, so when checking the operations with the bottom cover removed (especially when checking the signal system), be sure to ground the chassis by using an alligator clip or other suitable gadget. Also, this mechanism is designed for pack sensing, remember that it can not be operated without any tape.

■ Cassette holder removal

1. Remove the cassette mechanism from the front panel block.
2. Remove the dampers.
3. Remove the holder spring from the holder bracket.
4. Remove the cassette holder from the holder bracket.

■ System controller PCB removal

1. Remove the front panel block.
2. Remove the screw Ⓔ. and remove the PCB .

■ Cassette lid removal

1. Open the doors and slide them in the direction of the arrows.

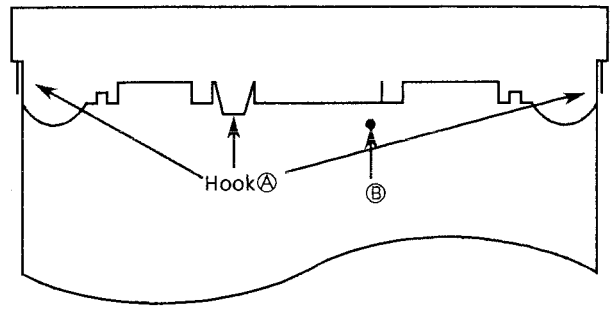


Figure 1 Bottom view of the front panel

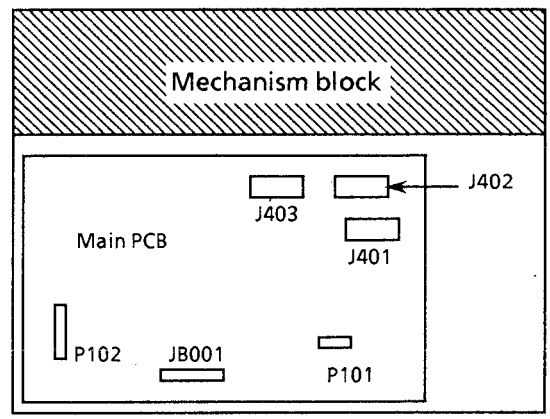


Figure 2 Top view

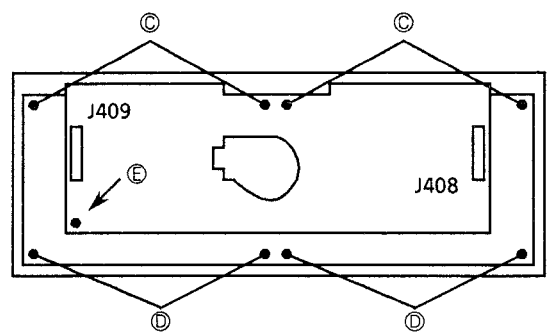


Figure 3 Rear view of the front panel block

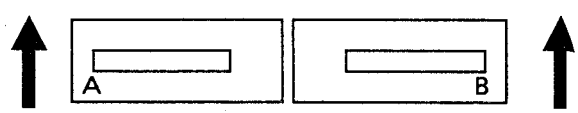


Figure 4 Cassette lids

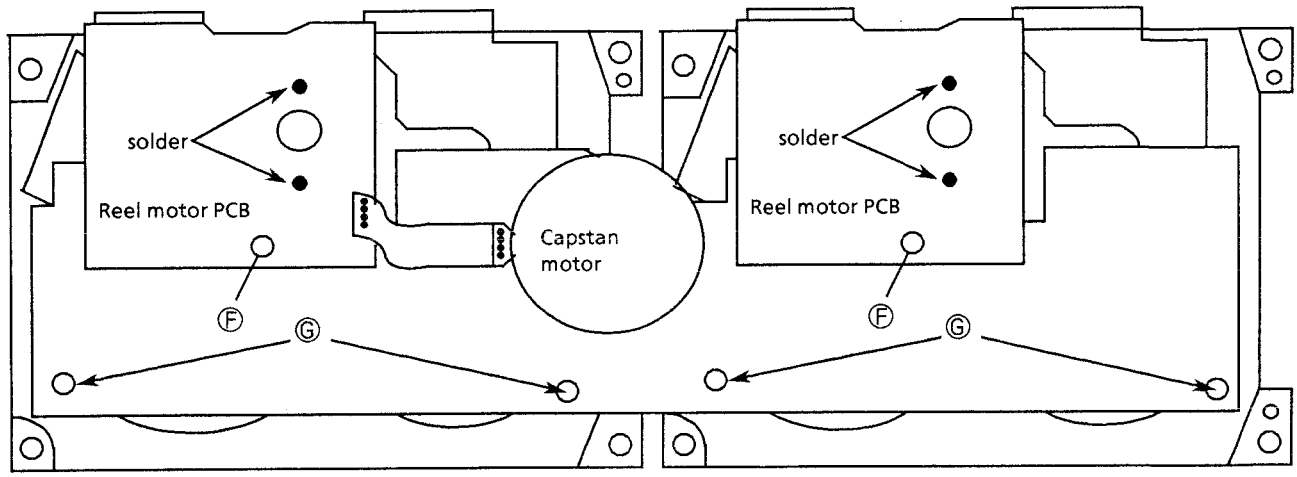


Figure 5 Rear view of the cassette mechanism

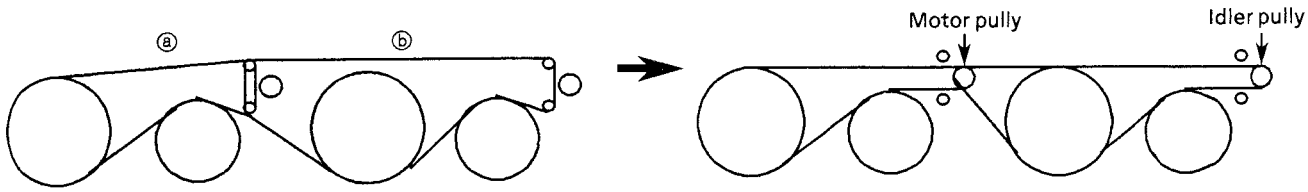


Figure 6 How to put the belts

■ Flywheel removal

1. Remove the mechanism block.
2. Remove the system controller PCB.
3. Remove the reel motor.PCBs.
4. Remove the 4 screws fixing the bracket on which capstan motor is installed.
5. Remove the bracket and the belts.
6. Release the flywheel from the washer .

INSTALL

Install the flywheel and the belts to the mechanism as shown in figure 6. (When putting the belts, put the belt ⓐ first.)

At last, install the bracket with the capstan motor and put the belts on the pullies.

■ CAM switch PCB removal

1. Remove the flywheels.
2. Release the hook fixing the PCB and remove the PCB.

(When installing the CAM switch gears, assemble the PCB so that part Ⓗ meets part Ⓘ.figure7)

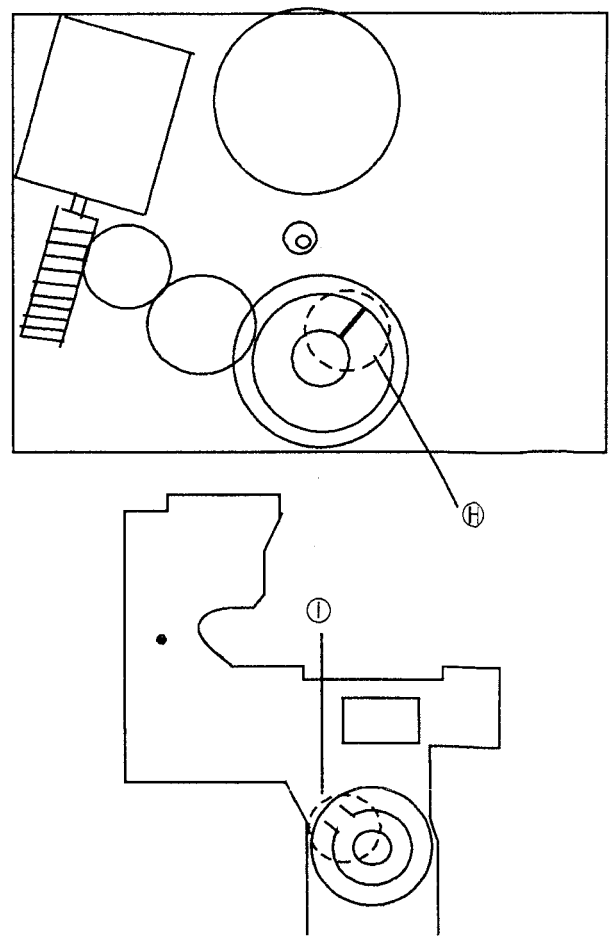


Figure 7 Gear position

■ Head assembly removal

1. Remove the cassette mechanism.
2. Unsolder the flexible wire on the relay PCB, and remove the 2 screws ⓚ fixing the head assembly(Figure 10).

Notice for installing the head assembly
The direction of the head for forward or reverse mode is switched by the cam gear.
The point of the rib for the head assembly installation differs with the head direction.Figure 8 shows the relation of the gears.

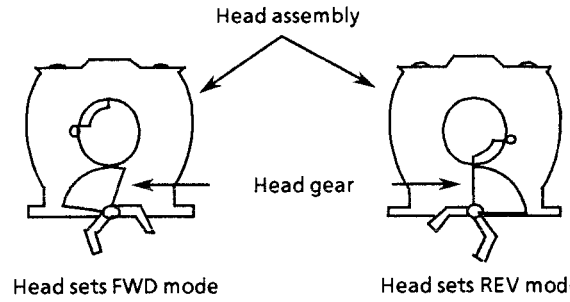


Figure 8 Bottom view of the head assembly

■ Pinch roller arm assembly removal (FWD / REV)

1. Release the pinch roller return spring from the hook (Figure 10).
2. Remove the hook fixing the pinch roller assembly, and remove the pinch roller assembly (Figure 9).

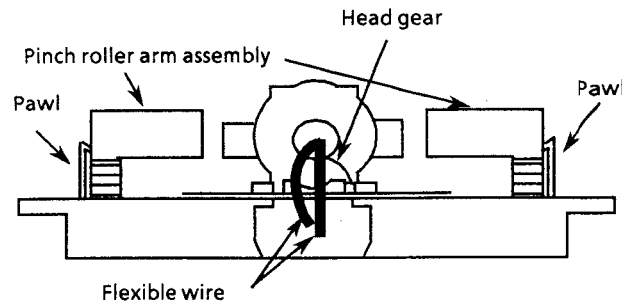


Figure 9 Bottom view of the cassette mechanism

■ Reel motor PCB removal

1. Remove the mechanism block.
2. Remove the system controller PCB.
3. Remove the screw Ⓕ fixing the reel motor PCB (Figure 5).
4. Unsolder the reel motor.
5. Remove the PCB.

■ Reel motor removal

1. Remove the mechanism block.
2. Remove the reel motor PCB.
3. Remove the FR arm assembly (Figure 10).
4. Remove the screws Ⓙ fixing the motor.
5. Release the pawl fixing the motor and remove the motor.

■ Capstan motor removal

1. Remove the mechanism block.
2. Remove the system controller PCB.
3. Remove the reel motor PCB.
4. Remove the 4 screws Ⓖ fixing the bracket (Figure 5).
5. Release the pawl fixing the bracket and remove the capstan motor with the bracket.
6. Remove the 2 screws fixing the motor on the bracket and remove the motor from the bracket.

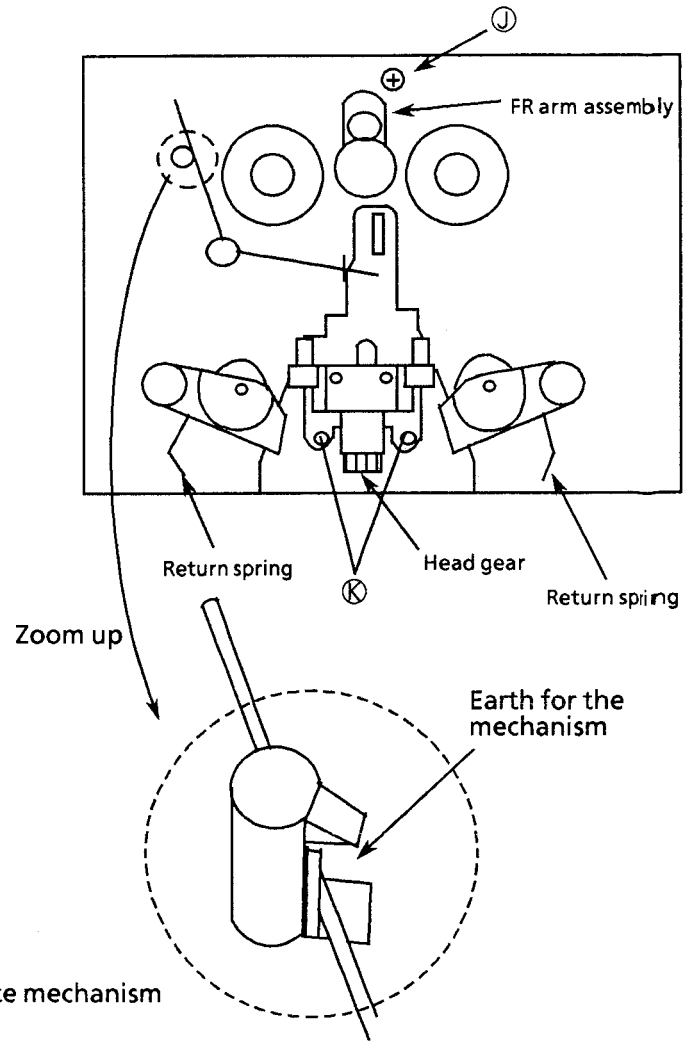


Figure 10 Front view of the cassette mechanism

Adjustment Procedures(Cassette Deck)

1. Measuring instruments

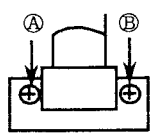
Audio frequency signal generator (0dbs output at the 600 ohm output terminal from 50Hz to 20KHz)
Electronic voltmeter
Frequency counter
Wow & Flutter meter
Distortion Meter with band pass filter
Attenuator (600 ohm impedance)
A resistor with 600Ω

Standard Tape **0dBs = 0.775V**

Tape No.	Frequency	Level (Wow & Fkutter)	Purpose
VTT-703L	10kHz	- 10dBs	Head azimuth , Frequency Response
VTT-712	3000Hz	0dBs 0.025%WRMS	Tape Speed , Wow & Flutter
VTT-724	1kHz	- 4dBs	Standard Level
TMT-6447	—	—	Blunk Skip
TMT-6247 , TMT-6237	—	—	Music Scan
TMT-7046	—	—	Recording standard Normal : UR
AC-712	—	—	Recording standard METAL :MA
AC-513	—	—	Recording standard CrO_2 : SA
TW-2111, TW-2121	—	—	Forward / reverse play torque measuring
TW-2231	—	—	Feed forward / rewind torque measuring
C-120 Tape	—	—	Comfirming the tape running

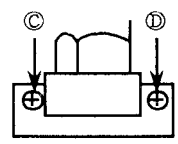
2. Adjustment and repairing the mechanism

Item	Adjustment method	Standard value	Remarks
Head azimuth	Deck A 1. Connect an electronic voltmeter to the VCR REC OUT to playback VTT-703L. 2. Adjust screw Ⓐ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 3. Adjust screw Ⓑ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. Deck B 4. Adjust screw Ⓒ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 5. Adjust screw Ⓓ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. 6. After making the adjustment,apply screw lock to prevent screws Ⓐ , Ⓑ , Ⓒ and Ⓓ coming loose .	Maximum	1. **Refer to figure 1.** 2. When the specified characteristic cannot be obtained because of head wear, excessive magnetization, etc., replace the head assembly and adjust the head azimuth. Also, perform the electric adjustment. 3. When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head assembly to avoid complaints.
Playback torque	1. Measure the torque in the playback mode by the torqu meter.	26 ~ 67 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Fast forward torque	1. Measure the torque in the fast forward mode by the torqu meter.	80 ~ 200 g-cm	When the standard torque cannot be obtained,replace the FR arm assembly or motor.
Rewind torque	1. Measure the torque in the rewind mode by the torqu meter.	80~ 200 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Wow & flutter	1. Connect the wow & flutter meter to the DOLBY TP(figure 3) and play back VTT-712 . 2. Its reading should be within 0.2% (WTD).	Less than 0.2%	As a complaint may occur if the wow & flutter fluctuates by 0.1% even though it is allowed in the standard, repairing is required.



Deck A

Figure 1



Deck B

3. Electrical Adjustments (Make the following adjustments after adjusting the head azimuth.)

In principle, the adjustments should be made in the following sequence.
Set the NR switch to OFF and the BEAT CUT switch to "1".
Adjustments marked with an asterisk (*) should always be made after the head is replaced **0dBs = 0.775V.**

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
1	Tape Speed	1. Connect a frequency counter to the VCR REC OUT and play back VTT-712. 2. Normal speed Adjustment 1) Mechanism B play back deck B to adjust the semi-fixed resistor VR451on ENJ-067-1. 3. Hign-speed adjustment 1) Mechanism A play back deck A and adjust the semi-fixed resistor VR452on ENJ-067-2.	VR451 VR452	3,000 Hz ±10Hz 6,000 Hz ±20Hz	1) Adjust the normal speed first, and perform the hign speed adjustment
*2	Standard level (Playback Level)	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). Play back VTT-724 (1 kHz : −4dBs) to adjust the semi-fixed resistors.	**Deck A** L: VR111 R: VR112 **Deck B** L: VR141 R: VR142	−5.5dBs (411mV) ±1dB	1) The playback level varies when the head is replaced so should be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
*3	Playback Frequency Response	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). 2. Play VTT-703L (10kHz : −10dBs) and adjust semi-fixed resistors to obtain the standard values.	**Deck A** L: VR113 R: VR114 **Deck B** L: VR143 R: VR144	−11.5dBs (206mV) ±3dB	—
*4	Adjustment HX PRO	1. Connect an electronic voltmeter to the R307(L), R308(R) at either end, and record the no signal Metal tape . 2. Adjust to the liast Volues.	L301(L) L302(R)		—
*5	Recording Bias Frequency	1. Connect a frequency counter to the BIAS TP(figure 3), and perform a recording to adjust bias frequency.	L351	100 kHz ±5 kHz	Set the BEAT CUT SWITCH to "1".
*6	Record / Play Frequency Response (Bias current)	1. Supply 1kHz and 12.5kHz with 30mV signals to VCR terminals respectively to record them. 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded values. 3. If the values are not satisfied, adjust the semi-fixed resistors and record the signals again to confirm the values.	L : VR301 R : VR302	0±3 dB for 12.5 kHz with 1 kHz as the standard.	**Refer to figure 2 below.** 1) The recording and playback frequency response of a cassette deck are adjusted by adjusting the bias current. 2) Perform the adjustment with normal tape and confirm that the values are within the range for CrO_2 tape.

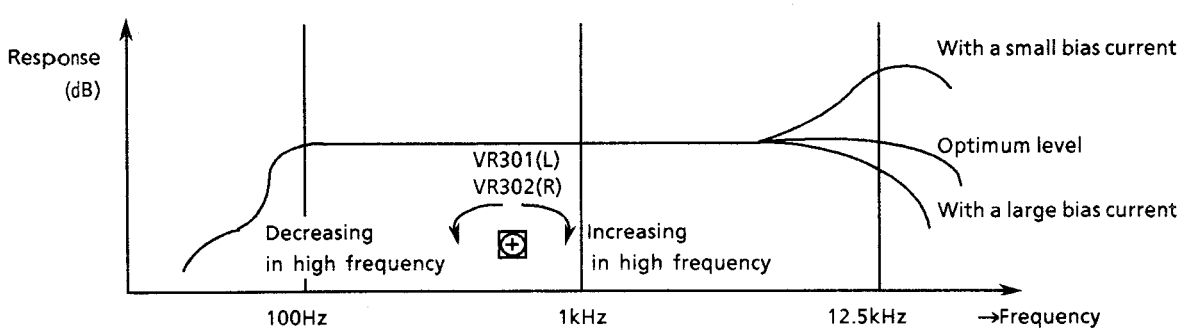
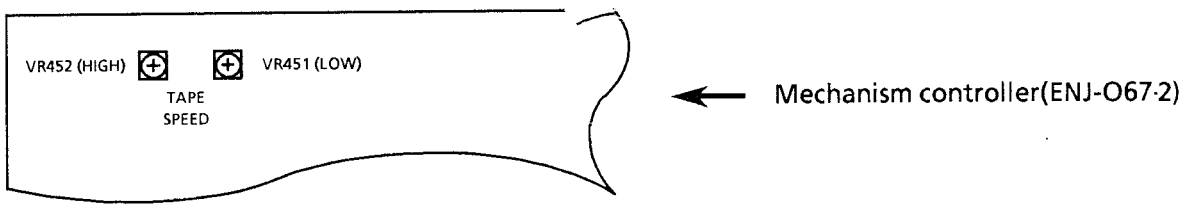


Figure 2

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
7	Record /Playback Sensitivity	1. Input a 1 kHz (−8.2dBs: 300mV) signal to VIDEO/AUX terminals and record it on the left and right channels . 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded values . 3. If the values are not satisfied , adjust the semi-fixed resistors and record the signals again to confirm the values.	L : VR185 R : VR186	−5.5dBs (411mV)	Adjust with normal tape and make sure that the left / right level difference is 1.0dB or less
8	Erase ratio check	1. Record a music source using the CrO_2 tape. 2. Rewind and erase the recorded section. 3. Comfirm nothing can be heard.	—	—	—
9	Auto-stop check	1. Make sure to operate AUTO STOP at the end of tape running and not to operate on the way of the playing.	—	—	—
10	Music Scan	1. Make sure not to work the music scanning operation at the start of tape wind using TMT-6237. 2. Make sure to work the music scanning operation at the end of tape wind using TMT-6247.	—	—	—
11	Blunk Skip	1. Make sure to work the blunk skip operation at the tape wind using TMT-6247.	—	—	—



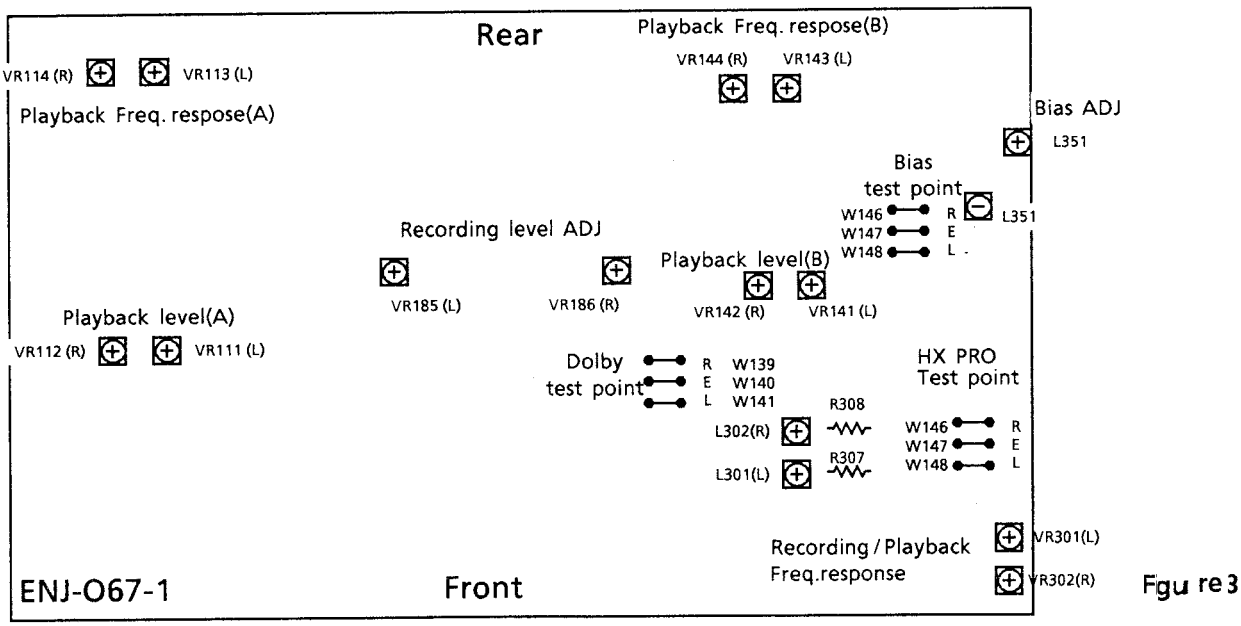
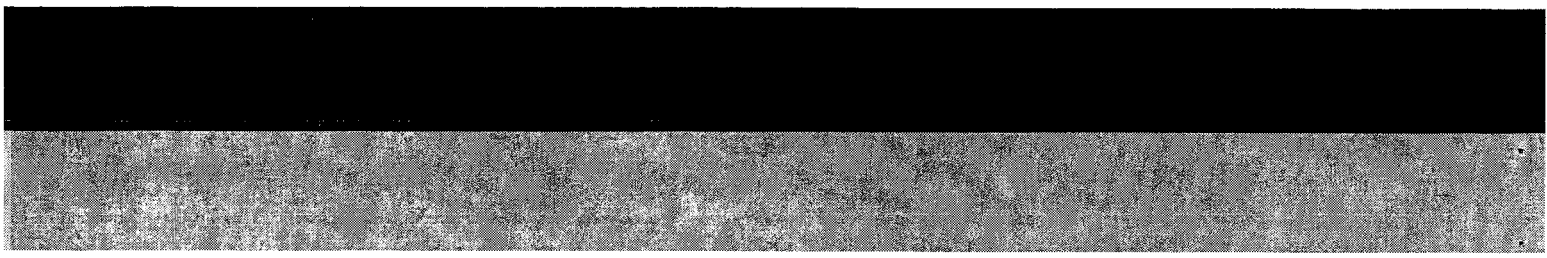


Figure 3



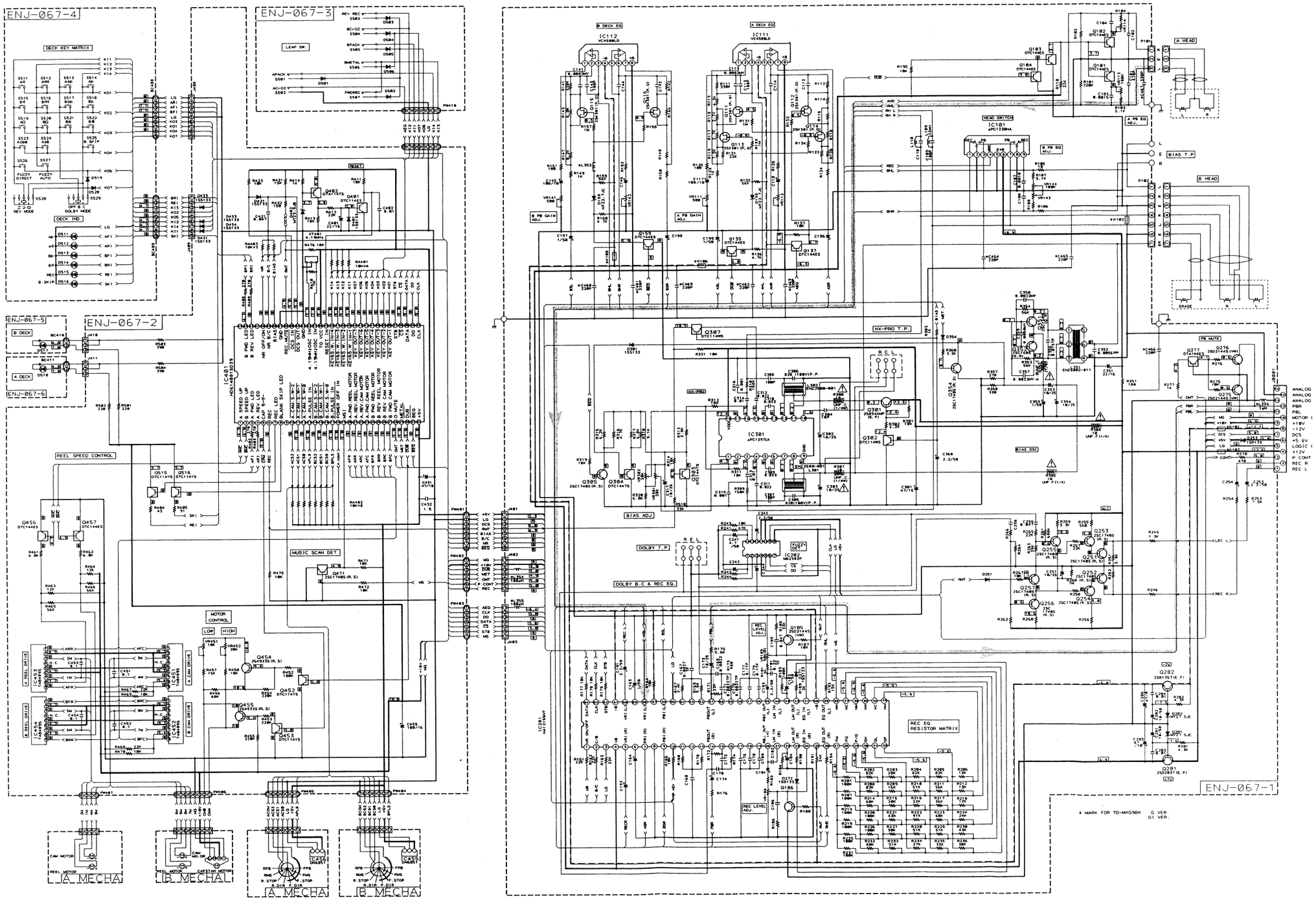
JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO DIVISION, YAMATO PLANT, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

(No. 20437)

Printed in Japar
9306[O]

Schematic Diagram



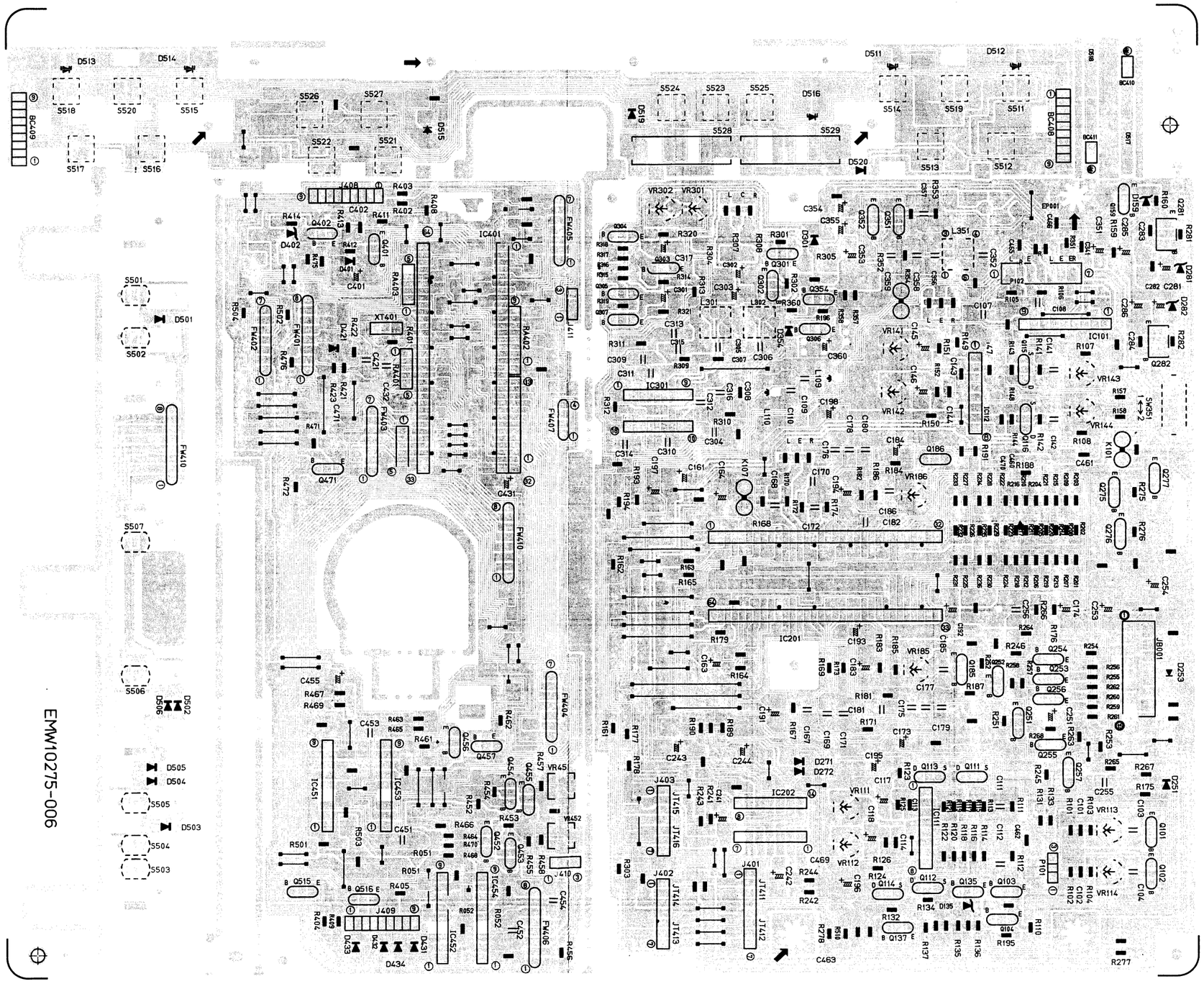
Notes:

1. —— indicates +B power supply
2. ----- indicates −B power supply.
3. ▒▒▒ indicates main signal path.
4. When replacing the parts in the shaded are (▒▒▒) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
5. The design and contents are subject to change without notice.

(No. 20437)

Printed Circuit Board

■ ENJ-067



EMW10275-006

(No. 20437) (No. 20437)

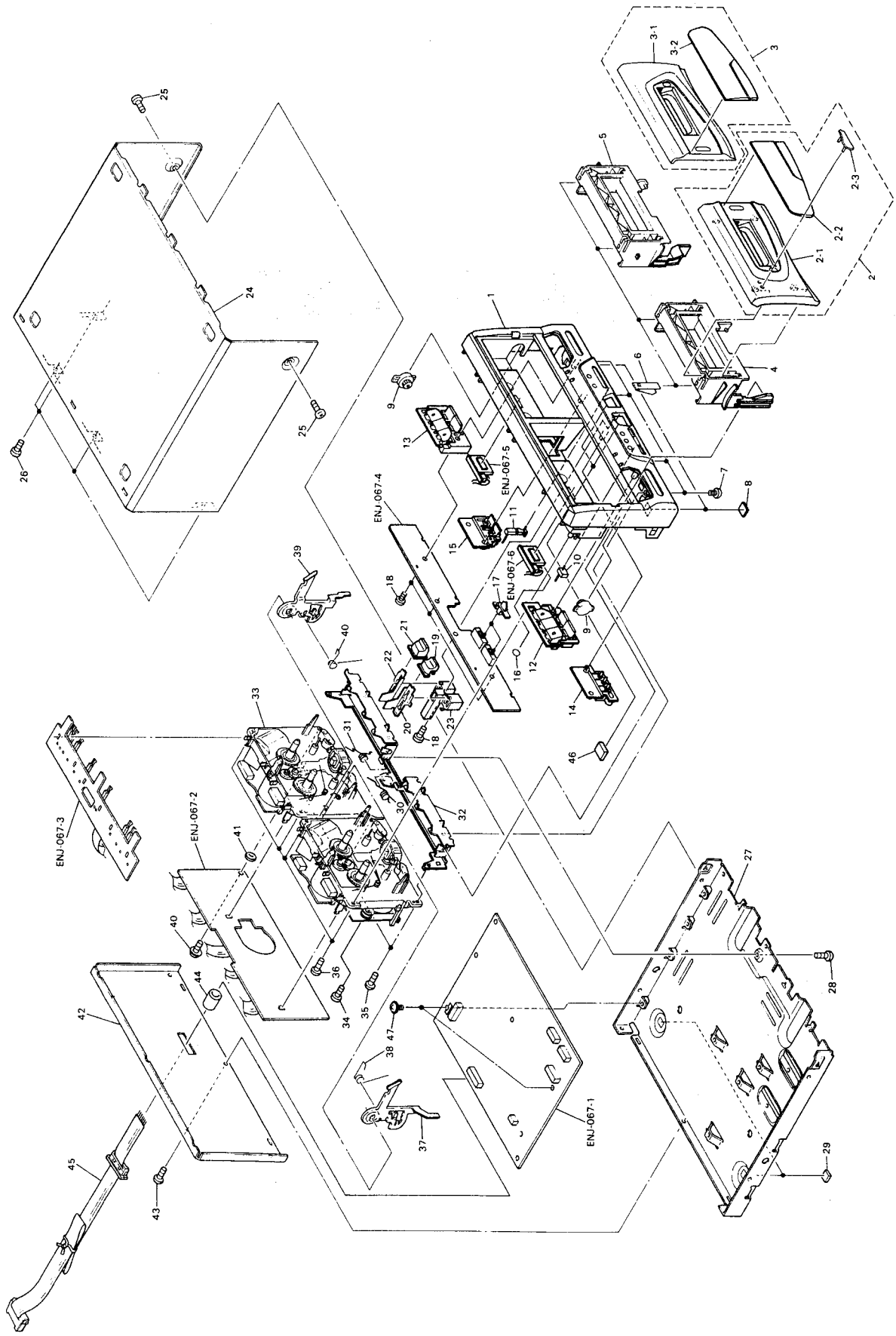
PARTS LIST

Note : All printed circuit boards and its assemblies are not available as service parts.

Contents

General Exploded View and Parts List ..... 2 – 2
Cassette Mechanism Ass'y and Parts List ..... 2 – 5
Printed Circuit Board Ass'y and Parts List ..... 2 – 8
■ ENJ-067 □ Cassette Deck PC Board Ass'y ..... 2 – 8

General Exploded View and Parts List



■ Parts List

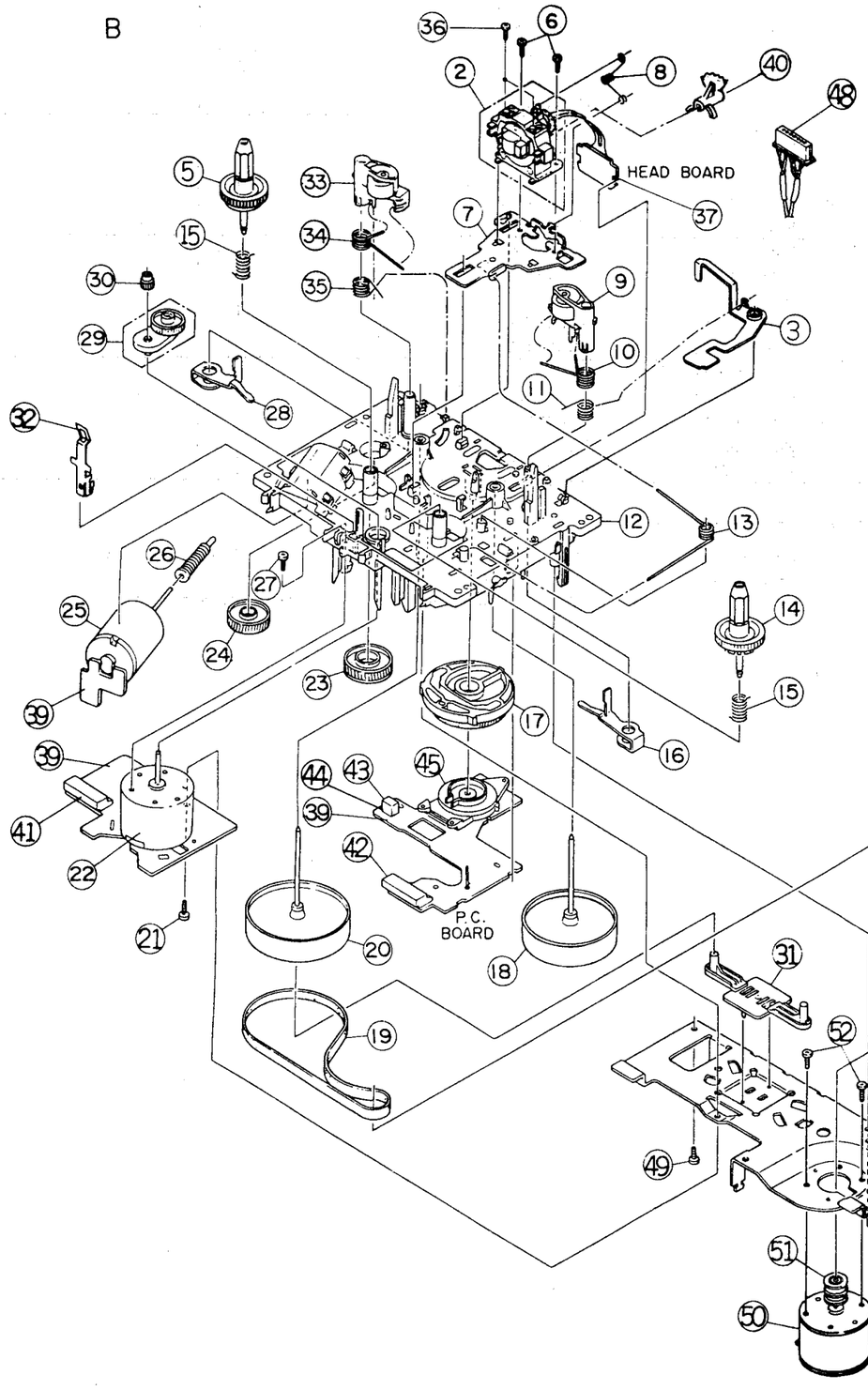
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	E102632-006	FRONT PANEL	1		
	2	E102637-002SA	CASS.LID ASSY	1		
	2-1	E102637-002	CASS.LID (A)	1		
	2-2	E308209-001	CASS.LENS(A)	1		
	2-3	E406971-221	JVC MARK	1		
	3	E102639-004SA	CASS.LID ASSY	1		
	3-1	E102639-004	CASS.LID(B)	1		
	3-2	E308211-001	CASS.LENS(B)	1		
	4	E207642-001	CASS.HOLDER(A)	1		
	5	E207643-001	CASS.HOLDER(B)	1		
	6	E406713-001	CASS. SPRING	1		
	7	SBST3006M	SCREW	4		
	8	E406855-008	SPACER	1		
	9	E304434-003	DUMPER ASSY	1		
	10	E407241-001	INDICATOR	1		
	11	E407242-001	INDICATOR	1		
	12	E207648-001	PUSH.B.ASSY	1	PLAY·STOP	
	13	E207651-001	PUSH.B.ASSY	1	PLAY·STOP	
	14	E207654-001	PUSH BUTTON	1	DUBBING	
	15	E207655-002	PUSH BUTTON	1	FUZZZY LOGIC CD REC	
	16	E60912-003	SPEED NUT	1		
	17	E407239-001	SLIDE KNOB	1		
	18	SDSF2608Z	SCREW	4		
	19	E308205-001	EJECT BUTTON(A)	1		
	20	E407237-001	PUSH PLATE	1		
	21	E308207-001	EJECT BUTTON(B)	1		
	22	E407238-001	PUSH PLATE	1		
	23	E308204-002	EJECT GUIDE	1		
	24	E207591-002	METAL COVER	1		
	25	SDSG3008M	SCREW	2		
	26	E73273-003	SPECIAL SCREW	4		
	27	E102462-001	CHASSIS BASE	1		
	28	SBST3006Z	SCREW	1		
	29	E406855-005	SPACER	1		
	30	E407324-001	HOLDER SPRING	1		
	31	E407325-001	HOLDER SPRING	1		
	32	E207641-002	HOLDER BKT	1		
	33	----------	CASS.MECHA ASSY	1	SEE PAGE 2-5	
	34	E65923-001	T.SCREW	1		
	35	SBST3008C	SCREW	2		
	36	SBSF3010C	SCREW	4		
	37	E308202-001	EJEC LEVER(A)	1		
	38	E406669-001	EJECT SPRING(A)	1		
	39	E308203-001	EJEC LEVER(B)	1		
	40	E406670-001	EJECT SPRING(B)	1		
	41	E73967-010	SPACER	1		
	42	E207639-008	REAR PANEL	1		A
		E207639-008	REAR PANEL	1		BS
		E207639-008	REAR PANEL	1		EF
		E207639-008	REAR PANEL	1		EN
		E207639-008	REAR PANEL	1		G
		E207639-008	REAR PANEL	1		GI
		E207639-007	REAR PANEL	1		U
		E207639-007	REAR PANEL	1		US
		E207639-007	REAR PANEL	1		UT
	43	SBSG3008CC	SCREW	1		
	44	ENZ8104-001	CLAMP FILT	1		G
		ENZ8104-001	CLAMP FILT	1		GI
	45	EWP907-003	PLUG CORD	1		A
		EWP907-003	PLUG CORD	1		BS
		EWP907-003	PLUG CORD	1		EF
		EWP907-003	PLUG CORD	1		EN
		EWP907-013	PLUG CORD	1		G
		EWP907-013	PLUG CORD	1		GI
		EWP907-003	PLUG CORD	1		U
		EWP907-003	PLUG CORD	1		US
		EWP907-003	PLUG CORD	1		UT
	46	EXO010005A03S14	SPACER	1		
	47	GBSG3008CC	SCREW	2		
	-	E61029-011	NUMBER LABEL	1		

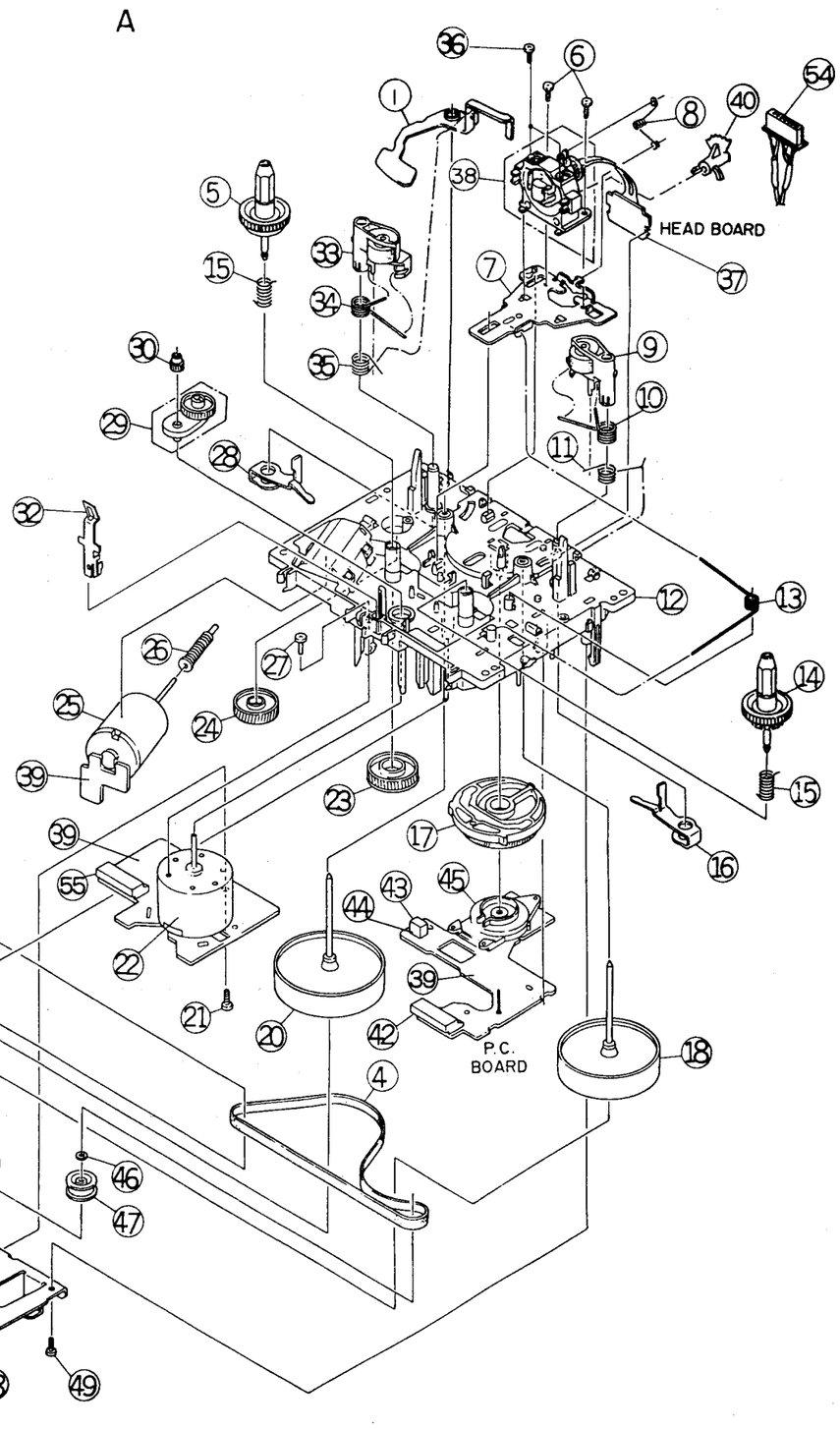
⚠ : Safety Parts

The Marks for Designated Areas

A	Australia	BS	the U.K.	EF	Continental Europe
EN	Scandinavia	G	Germany	GI	Italy
US	Singapore	UT	Taiwan	No mark indicates all area.	

Cassette Mechanism Ass'y and Parts List





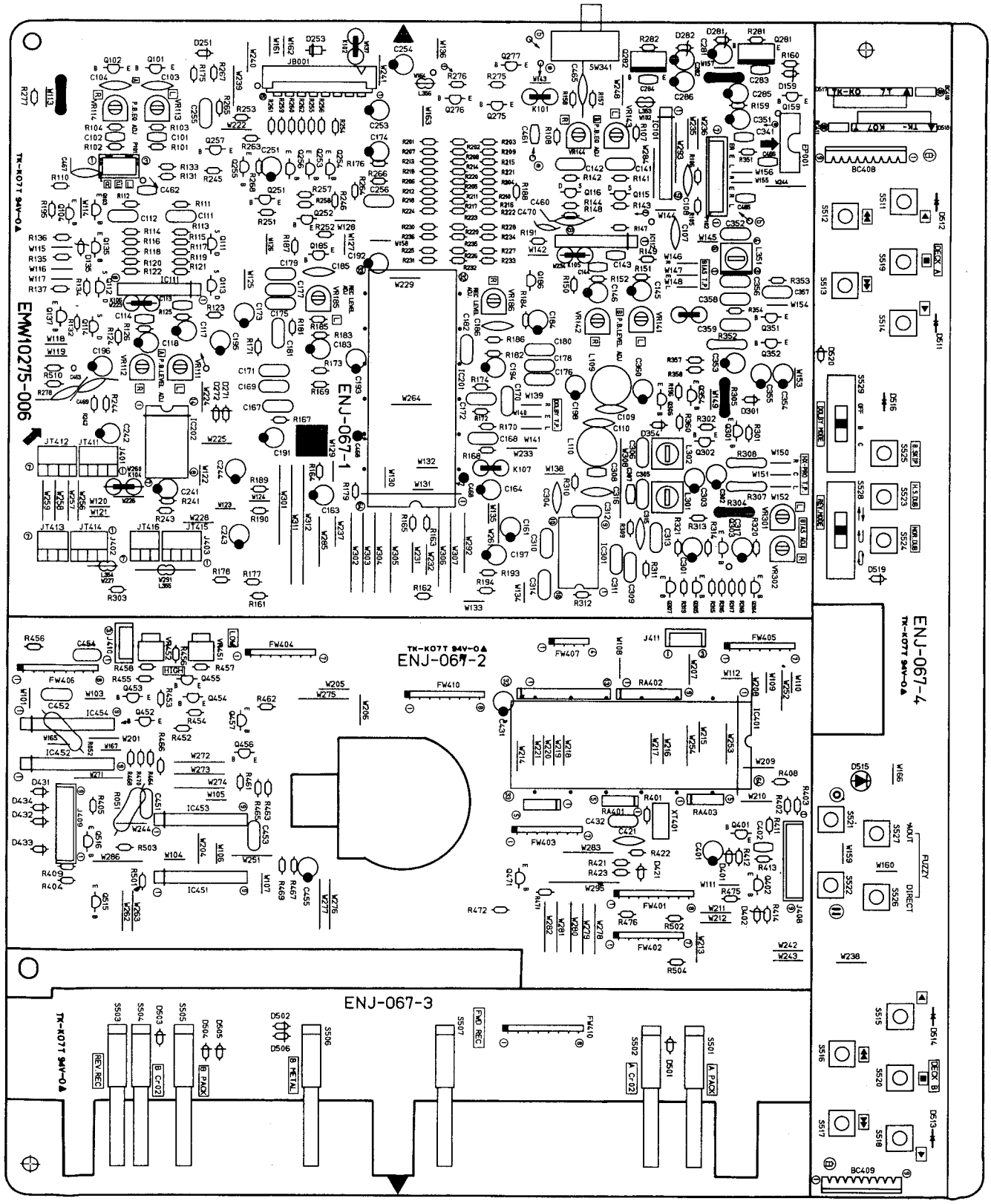
■ Parts List (Cassette Mechanism)

Item	Part Number	Part Name	Q'ty	Description	Areas
1	VKL6954-007	EJECT SAFETY LEVER	1	A MECHANISM	
2	VKS3551-00C	HEAD BLOCK ASSY	1	B MECHANISM	
3	VKL6943-005	EJECT SAFETY LEVER	1	B MECHANISM	
4	VKB3001-050	CAPSTAN BELT	1	A MECHANISM	
5	VKS5321-00D	REEL ASSY	2	RIGHT	
6	SDST2004Z	SCREW	4	FOR HEAD MOUNT ASSY	
7	VKL6942-00E	HEAD BASE ASSY	2		
8	VKW4994-001	HEAD SPRING	2		
9	VKP4221-00C	PINCH ROLLER ASSY	2	LEFT	
10	VKW4982-001	TORSION SPRING	2	LEFT	
11	VKW4933-005	TORSION SPRING	2	LEFT	
12	VKS1112-30E	CHASSIS BASE ASSY	2		
13	VKW4930-002	RETURN SPRING	2		
14	VKS3480-005	REEL ASSY	2	LEFT	
15	VKW4928-003	B.T SPRING	4	FOR REEL ASSY	
16	VKL6940-002	PINCH ROLLER LEVER	2	LEFT	
17	VKS2209-006	CONTROLLER CAM	2		
18	VKF3186-00C	FLYWHEEL ASSY	2	LEFT	
19	VKB3001-048	CAPSTAN BELT	1	B MECHANISM	
20	VKF3184-00C	FLYWHEEL ASSY	2	RIGHT	
21	SDSF2608Z	SCREW	2	PC BOARD - FM BRACKET	
22	MMN-6F4RA38	DC MOTOR	2	REEL	
23	VKS5331-002	GEAR (6)	2		
24	VKS5330-004	GEAR (5)	2		
25	MXN-13FB12F	DC MOTOR	2	CAM	
26	VKS5329-002	GEAR (4)	2		
27	SDSP2605Z	SCREW	2	CHASSIS BASE - D.C. MOTOR	
28	VKL6939-002	PINCH ROLLER LEVER	2	RIGHT	
29	VKS5325-00F	FR ARM ASSY	2		
30	VKS5328-002	REEL MOTOR GEAR	2		
31	VKS5327-003	THRUST PALTE	2		
32	VKY4628-002	PACK SPRING	2		
33	VKP4219-00C	PINCH ROLLER ASSY	2	RIGHT	
34	VKW4981-001	TORSION SPRING	2	RIGHT	
35	VKW4932-005	TORSION SPRING	2	RIGHT	
36	VKZ4629-003	SCREW	4		
37	VMW4816-001	PRINTED BOARD	2		
38	VKS3550-00C	HEAD MOUNT ASSY	1	A MECHANISM	
39	VMW2345-002	PRINTED BOARD	2		
40	VKS3485-002	HEAD BLOCK GEAR	2		
41	VMC0249-R08	CONNECTOR	1	B MECHANISM	
42	VMC0249-R07	CONNECTOR	2		
43	DN6851A	HALL IC	2		
44	VKS3487-002	IC HALL	2		
45	VKS3587-00A	CAM SWITCH ASSY	2		
46	WDL163525-4	WASHER	1		
47	VKR4631-002	IDLER PULLEY	1		
48	VKM3419-00E	FM BRACKET	1		
49	SDSF2605Z	SCREW	4	CHASSIS BASE - BRACKET	
50	MMI-6H2LWSK	MOTOR	1	CAPSTAN	
51	VKR4632-003	MOTOR PULLEY	1		
52	SPSP2603Z	SCREW	2		
53	VDM107P-040	HEAD WIRE	1	B MECHANISM	
54	VDM103P-040	HEAD WIRE	1	A MECHANISM	
55	VMC0249-R04	CONNECTOR	1	A MECHANISM	

Printed Circuit Board Ass'y and Parts List

■ENJ-067 □Cassette Deck PC Board Ass'y

Note : ENJ-067 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Designated Areas
ENJ-067 [B]	A	Australia
	BS	the U.K.
	EF	Continental Europe
	EN	Scandinavia
ENJ-067 [C]	G	Germany
	GI	Italy
ENJ-067 [D]	U	Universal Type
	US	Singapore
	UT	Taiwan

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q101	DTC144ES	SILICON	ROHM	
	Q102	DTC144ES	SILICON	ROHM	
	Q103	DTC144ES	SILICON	ROHM	
	Q104	DTC144ES	SILICON	ROHM	
	Q111	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q112	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q113	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q114	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q115	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q116	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q135	DTC144ES	SILICON	ROHM	
	Q137	DTC144ES	SILICON	ROHM	
	Q159	DTC144ES	SILICON	ROHM	
	Q185	2SD2144S(VW)	SILICON	ROHM	
	Q186	2SD2144S(VW)	SILICON	ROHM	
	Q251	2SC1740S(R,S)	SILICON	ROHM	
	Q252	2SC1740S(R,S)	SILICON	ROHM	
	Q253	2SC1740S(R,S)	SILICON	ROHM	
	Q254	2SC1740S(R,S)	SILICON	ROHM	
	Q255	2SC1740S(R,S)	SILICON	ROHM	
	Q256	2SC1740S(R,S)	SILICON	ROHM	
	Q257	2SC1740S(R,S)	SILICON	ROHM	
	Q275	2SD2144S(VW)	SILICON	ROHM	
	Q276	2SD2144S(VW)	SILICON	ROHM	
	Q277	DTA144ES	SILICON	ROHM	
	Q281	2SD2037(E,F)	SILICON	ROHM	
	Q282	2SB1357(E,F)	SILICON	ROHM	
	Q301	2SA934(Q,R)	SILICON	ROHM	
	Q302	DTC114WS	SILICON	S001	
	Q303	DTC144TS	SILICON	ROHM	
	Q304	DTC144TS	SILICON	ROHM	
	Q305	2SC1740S(R,S)	SILICON	ROHM	
	Q306	DTC144ES	SILICON	ROHM	
	Q307	DTC114WS	SILICON	S001	
	Q351	2SC3311A(Q,R)	SILICON	MATSUSHITA	
	Q352	2SC3311A(Q,R)	SILICON	MATSUSHITA	
	Q354	2SC1740S(R,S)	SILICON	ROHM	
	Q401	DTC114ES	SILICON	ROHM	
	Q402	DTA114TS	SILICON	ROHM	
	Q452	DTC114YS	SILICON	ROHM	
	Q453	DTC114YS	SILICON	ROHM	
	Q454	2SA933S(R,S)	SILICON		
	Q455	2SA933S(R,S)	SILICON		
	Q456	DTC144ES	SILICON	ROHM	
	Q457	DTC144ES	SILICON	ROHM	
	Q471	2SC1740S(R,S)	SILICON	ROHM	
	Q515	DTC114YS	SILICON	ROHM	
	Q516	DTC114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC101	UPC1330HA	I.C.	NEC	
	IC111	VC4580LD	I.C.	DAINICHI	
	IC112	VC4580LD	I.C.	DAINICHI	
	IC201	HA12155NT	I.C.	HITACHI	
	IC202	M62302P	I.C.	MITSUBISHI	
	IC301	UPC1297CA	I.C.	NEC	
	IC401	HD614081SD46	I.C.	HITACHI	
	IC451	TA8409S	I.C.	TOSHIBA	
	IC452	TA8409S	I.C.	TOSHIBA	
	IC453	TA8409S	I.C.	TOSHIBA	
	IC454	TA8409S	I.C.	TOSHIBA	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D135	MTZ2.7JB	ZENER	ROHM	
	D159	MTZ2.7JB	ZENER	ROHM	
	D251	1SS119	SILICON	HITACHI	
	D253	1SR35-200A	SILICON	ROHM	
	D271	1SS119	SILICON	HITACHI	
	D272	1SS119	SILICON	HITACHI	
	D281	MTZ7.5JC	ZENER	ROHM	
	D282	MTZ7.5JC	ZENER	ROHM	
	D301	1SS119	SILICON	HITACHI	
	D354	1SS119	SILICON	HITACHI	
	D401	1SS119	SILICON	HITACHI	
	D402	MTZ3.9JB	ZENER	ROHM	
	D421	1SS119	SILICON	HITACHI	
	D431	1SS119	SILICON	HITACHI	
	D432	1SS119	SILICON	HITACHI	
	D433	1SS119	SILICON	HITACHI	
	D434	1SS119	SILICON	HITACHI	
	D501	1SS119	SILICON	HITACHI	
	D502	1SS119	SILICON	HITACHI	
	D503	1SS119	SILICON	HITACHI	
	D504	1SS119	SILICON	HITACHI	
	D505	1SS119	SILICON	HITACHI	
	D506	1SS119	SILICON	HITACHI	
	D511	SLR-342MCA47	L.E.D.	ROHM	
	D512	SLR-342MCA47	L.E.D.	ROHM	
	D513	SLR-342MCA47	L.E.D.	ROHM	
	D514	SLR-342MCA47	L.E.D.	ROHM	
	D515	SLH-34VC50F124	L.E.D.	ROHM	
	D516	SLR-342VC3F	L.E.D.	ROHM	
	D517	LD-702MG	L.E.D.	ROHM	
	D518	LD-702MG	L.E.D.	ROHM	
	D519	1SS119	SILICON	HITACHI	
	D520	1SS119	SILICON	HITACHI	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QCBB1HK-331	330PF	50V	CERAMIC	
	C102	QCBB1HK-331	330PF	50V	CERAMIC	
	C103	QCY21HK-152	1500PF	50V	CERAMIC	
	C104	QCY21HK-152	1500PF	50V	CERAMIC	
	C107	QCY21HK-182	1800PF	50V	CERAMIC	
	C108	QCY21HK-182	1800PF	50V	CERAMIC	
	C109	QCS11HJ-101	100PF	50V	CERAMIC	
	C110	QCS11HJ-101	100PF	50V	CERAMIC	
	C111	QFN41HJ-822	8200PF	50V	MYLAR	
	C112	QFN41HJ-822	8200PF	50V	MYLAR	
	C113	QCBB1HK-101	100PF	50V	CERAMIC	
	C113	QCBB1HK-471	470PF	50V	CERAMIC	G
	C113	QCBB1HK-471	470PF	50V	CERAMIC	GI
	C114	QCBB1HK-101	100PF	50V	CERAMIC	
	C114	QCBB1HK-471	470PF	50V	CERAMIC	G
	C114	QCBB1HK-471	470PF	50V	CERAMIC	GI
	C117	QET41AM-107	100MF	10V	ELECTR(	
	C118	QET41AM-107	100MF	10V	ELECTR(	
	C141	QFN41HJ-822	8200PF	50V	MYLAR	
	C142	QFN41HJ-822	8200PF	50V	MYLAR	
	C143	QCBB1HK-101	100PF	50V	CERAMIC	
	C143	QCBB1HK-471	470PF	50V	CERAMIC	G
	C143	QCBB1HK-471	470PF	50V	CERAMIC	GI
	C144	QCBB1HK-101	100PF	50V	CERAMIC	
	C144	QCBB1HK-471	470PF	50V	CERAMIC	G
	C144	QCBB1HK-471	470PF	50V	CERAMIC	GI
	C145	QET41AM-107	100MF	10V	ELECTR(	
	C146	QET41AM-107	100MF	10V	ELECTR(	
	C151	QCBB1HK-101	100PF	50V	CERAMIC	
	C152	QCBB1HK-101	100PF	50V	CERAMIC	
	C161	QET41AM-107	100MF	10V	ELECTR(	
	C163	QET41HM-105	1MF	50V	ELECTR(	
	C164	QET41HM-105	1MF	50V	ELECTR(	
	C167	QFN81HJ-272	2700PF	50V	MYLAR	
	C168	QFN81HJ-272	2700PF	50V	MYLAR	
	C169	QFN81HJ-222	2200PF	50V	MYLAR	
	C170	QFN81HJ-222	2200PF	50V	MYLAR	
	C171	QFN81HJ-222	2200PF	50V	MYLAR	
	C172	QFN81HJ-222	2200PF	50V	MYLAR	
	C173	QET41EM-106	10MF	25V	ELECTR(	
	C174	QET41EM-106	10MF	25V	ELECTR(	
	C175	QFN81HJ-222	2200PF	50V	MYLAR	
	C176	QFN81HJ-222	2200PF	50V	MYLAR	
	C177	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C178	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C179	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C180	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C181	QFVB1HJ-103N	0.01MF	50V	T.FILM	
	C182	QFVB1HJ-103N	0.01MF	50V	T.FILM	
	C183	QET41HM-105	1MF	50V	ELECTR(	
	C184	QET41HM-105	1MF	50V	ELECTR(	
	C185	QCF11HP-473	0.047MF	50V	CERAMIC	
	C186	QCF11HP-473	0.047MF	50V	CERAMIC	
	C191	QETB1HM-225	2.2MF	50V	ELECTR(	
	C192	QETB1HM-225	2.2MF	50V	ELECTR(	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C193	QETB1HM-225	2.2MF 50V ELECTRO	
	C194	QETB1HM-225	2.2MF 50V ELECTRO	
	C195	QET41HM-105	1MF 50V ELECTRO	
	C196	QET41HM-105	1MF 50V ELECTRO	
	C197	QET41HM-105	1MF 50V ELECTRO	
	C198	QET41HM-105	1MF 50V ELECTRO	
	C241	QET41HM-475	4.7MF 50V ELECTRO	
	C242	QET41HM-475	4.7MF 50V ELECTRO	
	C243	QETB1HM-225	2.2MF 50V ELECTRO	
	C244	QETB1HM-225	2.2MF 50V ELECTRO	
	C251	QET41EM-106	10MF 25V ELECTRO	
	C253	QETB1HM-225	2.2MF 50V ELECTRO	
	C254	QETB1HM-225	2.2MF 50V ELECTRO	
	C255	QFVB1HJ-473N	0.047MF 50V T.FILM	
	C256	QFVB1HJ-473N	0.047MF 50V T.FILM	
	C281	QETB1HM-106	10MF 50V ELECTRO	
	C282	QETB1HM-106	10MF 50V ELECTRO	
	C283	QCVB1CM-103	0.01MF 16V CERAMIC	
	C284	QCVB1CM-103	0.01MF 16V CERAMIC	
	C285	QET41AM-476	47MF 10V ELECTRO	
	C286	QET41AM-476	47MF 10V ELECTRO	
	C301	QET41CM-476	47MF 16V ELECTRO	
	C302	QET41EM-106	10MF 25V ELECTRO	
	C303	QET41EM-106	10MF 25V ELECTRO	
	C304	QCS21HJ-100	10PF 50V CERAMIC	
	C305	QFP81HG-821	820PF 50V POLY	
	C306	QFP81HG-821	820PF 50V POLY	
	C307	QCBB1HK-101	100PF 50V CERAMIC	
	C308	QCBB1HK-101	100PF 50V CERAMIC	
	C309	QFV41HJ-333	0.033MF 50V T.FILM	
	C310	QFV41HJ-333	0.033MF 50V T.FILM	
	C311	QFVB1HJ-223N	0.022MF 50V T.FILM	
	C312	QFVB1HJ-223N	0.022MF 50V T.FILM	
	C313	QFVB1HJ-103N	0.01MF 50V T.FILM	
	C314	QFVB1HJ-103N	0.01MF 50V T.FILM	
	C315	QCF21HP-102	1000PF 50V CERAMIC	
	C316	QCF21HP-102	1000PF 50V CERAMIC	
	C317	QET41EM-106	10MF 25V ELECTRO	
	C341	QCBB1HK-471	470PF 50V CERAMIC	
	C351	QET41CM-226	22MF 16V ELECTRO	
	C352	QFP81HG-562	5600PF 50V POLY	
	C353	QET41EM-106	10MF 25V ELECTRO	
	C354	QET41EM-106	10MF 25V ELECTRO	
	C355	QET41HM-105	1MF 50V ELECTRO	
	C356	QFVB1HJ-153N	0.015MF 50V T.FILM	
	C357	QFN81HJ-222	2200PF 50V MYLAR	
	C358	QFN81HJ-222	2200PF 50V MYLAR	
	C359	QFN81HJ-682	6800PF 50V MYLAR	
	C360	QETB1HM-225	2.2MF 50V ELECTRO	
	C401	QET41CM-226	22MF 16V ELECTRO	
	C402	QCVB1CM-103	0.01MF 16V CERAMIC	
	C421	QCF11HP-473	0.047MF 50V CERAMIC	
	C431	QET41AM-476	47MF 10V ELECTRO	
	C432	QCZ0205-155	1.5MF 25V CERAMIC	
	C451	QFV81HJ-104	0.1MF 50V T.FILM	
	C452	QFV81HJ-104	0.1MF 50V T.FILM	
	C453	QFV81HJ-104	0.1MF 50V T.FILM	
	C454	QFV81HJ-104	0.1MF 50V T.FILM	
	C455	QET41CM-107	100MF 16V ELECTRO	
	C460	QCS21HJ-221	220PF 50V CERAMIC	G
	C460	QCS21HJ-221	220PF 50V CERAMIC	GI
	C461	QCBB1HK-221	220PF 50V CERAMIC	G
	C461	QCBB1HK-221	220PF 50V CERAMIC	GI
	C462	QCBB1HK-331	330PF 50V CERAMIC	G
	C462	QCBB1HK-331	330PF 50V CERAMIC	GI
	C463	QCS21HJ-221	220PF 50V CERAMIC	G
	C463	QCS21HJ-221	220PF 50V CERAMIC	GI
	C464	QCS21HJ-221	220PF 50V CERAMIC	G
	C464	QCS21HJ-221	220PF 50V CERAMIC	GI
	C465	QCBB1HK-221	220PF 50V CERAMIC	G
	C465	QCBB1HK-221	220PF 50V CERAMIC	GI
	C466	QCBB1HK-221	220PF 50V CERAMIC	G
	C466	QCBB1HK-221	220PF 50V CERAMIC	GI
	C467	QCS21HJ-331	330PF 50V CERAMIC	G
	C467	QCS21HJ-331	330PF 50V CERAMIC	GI
	C468	QCY41HK-102	1000PF 50V CERAMIC	G
	C468	QCY41HK-102	1000PF 50V CERAMIC	GI
	C469	QCS21HJ-221	220PF 50V CERAMIC	G
	C469	QCS21HJ-221	220PF 50V CERAMIC	GI
	C470	QCS21HJ-221	220PF 50V CERAMIC	G
	C470	QCS21HJ-221	220PF 50V CERAMIC	GI

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R101	QRD167J-224	220K 1/6W CARBON	
	R102	QRD167J-224	220K 1/6W CARBON	
	R103	QRD167J-512	5.1K 1/6W CARBON	
	R104	QRD167J-512	5.1K 1/6W CARBON	
	R105	QRD161J-100	10 1/6W CARBON	
	R106	QRD161J-100	10 1/6W CARBON	
	R107	QRD167J-512	5.1K 1/6W CARBON	
	R108	QRD167J-512	5.1K 1/6W CARBON	
	R110	QRD167J-223	22K 1/6W CARBON	
	R111	QRD167J-334	330K 1/6W CARBON	
	R112	QRD167J-334	330K 1/6W CARBON	
	R113	QRD167J-432	4.3K 1/6W CARBON	
	R114	QRD167J-432	4.3K 1/6W CARBON	
	R115	QRD161J-272	2.7K 1/6W CARBON	
	R116	QRD161J-272	2.7K 1/6W CARBON	
	R117	QRD161J-272	2.7K 1/6W CARBON	
	R118	QRD161J-272	2.7K 1/6W CARBON	
	R119	QRD167J-752	7.5K 1/6W CARBON	
	R120	QRD167J-752	7.5K 1/6W CARBON	
	R121	QRD167J-223	22K 1/6W CARBON	
	R122	QRD167J-223	22K 1/6W CARBON	
	R123	QRD167J-102	1K 1/6W CARBON	
	R124	QRD167J-102	1K 1/6W CARBON	
	R125	QRD167J-101	100 1/6W CARBON	
	R126	QRD167J-101	100 1/6W CARBON	
	R131	QRD167J-105	1M 1/6W CARBON	
	R132	QRD167J-105	1M 1/6W CARBON	
	R133	QRD167J-105	1M 1/6W CARBON	
	R134	QRD167J-105	1M 1/6W CARBON	
	R135	QRD167J-563	56K 1/6W CARBON	
	R136	QRD167J-472	4.7K 1/6W CARBON	
	R137	QRD167J-103	10K 1/6W CARBON	
	R141	QRD167J-334	330K 1/6W CARBON	
	R142	QRD167J-334	330K 1/6W CARBON	
	R143	QRD167J-682	6.8K 1/6W CARBON	
	R144	QRD167J-682	6.8K 1/6W CARBON	
	R147	QRD167J-822	8.2K 1/6W CARBON	
	R148	QRD167J-822	8.2K 1/6W CARBON	
	R149	QRD167J-102	1K 1/6W CARBON	
	R150	QRD167J-102	1K 1/6W CARBON	
	R151	QRD167J-101	100 1/6W CARBON	
	R152	QRD167J-101	100 1/6W CARBON	
	R157	QRD167J-105	1M 1/6W CARBON	
	R158	QRD167J-105	1M 1/6W CARBON	
	R159	QRD167J-563	56K 1/6W CARBON	
	R160	QRD167J-472	4.7K 1/6W CARBON	
	R161	QRD167J-223	22K 1/6W CARBON	
	R162	QRD167J-223	22K 1/6W CARBON	
	R163	QRD167J-223	22K 1/6W CARBON	
	R164	QRD167J-183	18K 1/6W CARBON	
	R165	QRD167J-103	10K 1/6W CARBON	
	R167	QRD167J-242	2.4K 1/6W CARBON	
	R168	QRD167J-242	2.4K 1/6W CARBON	
	R169	QRD167J-562	5.6K 1/6W CARBON	
	R170	QRD167J-562	5.6K 1/6W CARBON	
	R171	QRD167J-223	22K 1/6W CARBON	
	R172	QRD167J-223	22K 1/6W CARBON	
	R173	QRD167J-561	560 1/6W CARBON	
	R174	QRD167J-561	560 1/6W CARBON	
	R175	QRD167J-562	5.6K 1/6W CARBON	
	R176	QRD167J-562	5.6K 1/6W CARBON	
	R177	QRD167J-103	10K 1/6W CARBON	
	R178	QRD167J-103	10K 1/6W CARBON	
	R179	QRD167J-103	10K 1/6W CARBON	
	R181	QRD167J-202	2K 1/6W CARBON	
	R182	QRD167J-202	2K 1/6W CARBON	
	R183	QRD167J-104	100K 1/6W CARBON	
	R184	QRD167J-104	100K 1/6W CARBON	
	R185	QRD167J-333	33K 1/6W CARBON	
	R186	QRD167J-333	33K 1/6W CARBON	
	R187	QRD167J-103	10K 1/6W CARBON	
	R188	QRD167J-103	10K 1/6W CARBON	
	R189	QRD167J-202	2K 1/6W CARBON	
	R190	QRD167J-202	2K 1/6W CARBON	
	R191	QRD167J-243	24K 1/6W CARBON	
	R193	QRD167J-153	15K 1/6W CARBON	
	R194	QRD167J-153	15K 1/6W CARBON	
	R195	QRD167J-103	10K 1/6W CARBON	
	R196	QRD167J-103	10K 1/6W CARBON	
	R201	QRD167J-104	100K 1/6W CARBON	
	R202	QRD167J-823	82K 1/6W CARBON	
	R203	QRD167J-203	20K 1/6W CARBON	
	R204	QRD167J-823	82K 1/6W CARBON	
	R205	QRD167J-823	82K 1/6W CARBON	
	R206	QRD167J-133	13K 1/6W CARBON	
	R207	QRD167J-104	100K 1/6W CARBON	
	R208	QRD167J-823	82K 1/6W CARBON	
	R209	QRD167J-163	16K 1/6W CARBON	
	R210	QRD167J-513	51K 1/6W CARBON	
	R211	QRD167J-563	56K 1/6W CARBON	
	R212	QRD167J-133	13K 1/6W CARBON	
	R213	QRD167J-104	100K 1/6W CARBON	
	R214	QRD167J-683	68K 1/6W CARBON	
	R215	QRD167J-203	20K 1/6W CARBON	
	R216	QRD167J-223	22K 1/6W CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R217	QRD167J-363	36K 1/6W CARBON	
	R218	QRD167J-123	12K 1/6W CARBON	
	R219	QRD167J-104	100K 1/6W CARBON	
	R220	QRD167J-104	100K 1/6W CARBON	
	R221	QRD167J-433	43K 1/6W CARBON	
	R222	QRD167J-913	91K 1/6W CARBON	
	R223	QRD167J-683	68K 1/6W CARBON	
	R224	QRD167J-243	24K 1/6W CARBON	
	R225	QRD167J-104	100K 1/6W CARBON	
	R226	QRD167J-104	100K 1/6W CARBON	
	R227	QRD167J-303	30K 1/6W CARBON	
	R228	QRD167J-513	51K 1/6W CARBON	
	R229	QRD167J-513	51K 1/6W CARBON	
	R230	QRD167J-433	43K 1/6W CARBON	
	R231	QRD167J-104	100K 1/6W CARBON	
	R232	QRD167J-683	68K 1/6W CARBON	
	R233	QRD167J-513	51K 1/6W CARBON	
	R234	QRD167J-273	27K 1/6W CARBON	
	R235	QRD167J-333	33K 1/6W CARBON	
	R236	QRD167J-303	30K 1/6W CARBON	
	R241	QRD167J-473	47K 1/6W CARBON	
	R242	QRD167J-473	47K 1/6W CARBON	
	R243	QRD167J-103	10K 1/6W CARBON	
	R244	QRD167J-103	10K 1/6W CARBON	
	R245	QRD167J-132	1.3K 1/6W CARBON	
	R246	QRD167J-132	1.3K 1/6W CARBON	
	R251	QRD167J-392	3.9K 1/6W CARBON	
	R252	QRD167J-392	3.9K 1/6W CARBON	
	R253	QRD167J-752	7.5K 1/6W CARBON	
	R254	QRD167J-752	7.5K 1/6W CARBON	
	R255	QRD167J-561	560 1/6W CARBON	
	R256	QRD167J-561	560 1/6W CARBON	
	R257	QRD167J-223	22K 1/6W CARBON	
	R258	QRD167J-223	22K 1/6W CARBON	
	R259	QRD167J-332	3.3K 1/6W CARBON	
	R260	QRD167J-332	3.3K 1/6W CARBON	
	R261	QRD167J-684	680K 1/6W CARBON	
	R262	QRD167J-684	680K 1/6W CARBON	
	R263	QRD167J-393	39K 1/6W CARBON	
	R264	QRD167J-393	39K 1/6W CARBON	
	R265	QRD167J-223	22K 1/6W CARBON	
	R266	QRD167J-223	22K 1/6W CARBON	
	R267	QRD167J-103	10K 1/6W CARBON	
	R268	QRD167J-105	1M 1/6W CARBON	
	R275	QRD167J-103	10K 1/6W CARBON	
	R276	QRD167J-103	10K 1/6W CARBON	
	R277	QRD167J-102	1K 1/6W CARBON	
	R278	QRD167J-471	470 1/6W CARBON	
	R281	QRD167J-432	4.3K 1/6W CARBON	
	R282	QRD167J-432	4.3K 1/6W CARBON	
	R301	QRD167J-103	10K 1/6W CARBON	
	R302	QRD167J-222	2.2K 1/6W CARBON	
	R303	QRD167J-102	1K 1/6W CARBON	
⚠	R304	QRZ0077-100	10 1/4W FUSIBLE	
⚠	R305	QRZ0077-100	10 1/4W FUSIBLE	
	R307	QRD148J-100	10 1/4W CARBON	
	R308	QRD148J-100	10 1/4W CARBON	
	R309	QRD167J-154	150K 1/6W CARBON	
	R310	QRD167J-154	150K 1/6W CARBON	
	R311	QRD167J-183	18K 1/6W CARBON	
	R312	QRD167J-183	18K 1/6W CARBON	
	R313	QRD167J-392	3.9K 1/6W CARBON	
	R314	QRD167J-103	10K 1/6W CARBON	
	R315	QRD167J-622	6.2K 1/6W CARBON	
	R316	QRD167J-472	4.7K 1/6W CARBON	
	R317	QRD167J-682	6.8K 1/6W CARBON	
	R318	QRD167J-912	9.1K 1/6W CARBON	
	R319	QRD167J-103	10K 1/6W CARBON	
	R320	QRD167J-682	6.8K 1/6W CARBON	
	R321	QRD167J-103	10K 1/6W CARBON	
	R351	QRD167J-181	180 1/6W CARBON	
	R352	QRD148J-6R8	6.8 1/4W CARBON	
	R353	QRD167J-563	56K 1/6W CARBON	
	R354	QRD167J-563	56K 1/6W CARBON	
	R357	QRD167J-271	270 1/6W CARBON	
	R358	QRD167J-331	330 1/6W CARBON	
	R360	QRD167J-332	3.3K 1/6W CARBON	
	R401	QRD167J-105	1M 1/6W CARBON	
	R402	QRD167J-271	270 1/6W CARBON	
	R403	QRD167J-271	270 1/6W CARBON	
	R404	QRD161J-430YT	43 1/6W CARBON	
	R405	QRD167J-910	91 1/6W CARBON	
	R408	QRD167J-271	270 1/6W CARBON	
	R409	QRD167J-271	270 1/6W CARBON	
	R411	QRD167J-103	10K 1/6W CARBON	
	R412	QRD167J-223	22K 1/6W CARBON	
	R413	QRD167J-103	10K 1/6W CARBON	
	R414	QRD167J-102	1K 1/6W CARBON	
	R421	QRD167J-153	15K 1/6W CARBON	
	R422	QRD167J-151	150 1/6W CARBON	
	R423	QRD167J-103	10K 1/6W CARBON	
	R452	QRD167J-184	180K 1/6W CARBON	
	R453	QRD167J-224	220K 1/6W CARBON	
	R454	QRD167J-224	220K 1/6W CARBON	
	R455	QRD167J-224	220K 1/6W CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R456	QRD167J-683	68K 1/6W CARBON	
	R457	QRD167J-153	15K 1/6W CARBON	
	R458	QRD167J-183	18K 1/6W CARBON	
	R461	QRD167J-682	6.8K 1/6W CARBON	
	R462	QRD167J-682	6.8K 1/6W CARBON	
	R463	QRD167J-123	12K 1/6W CARBON	
	R464	QRD167J-123	12K 1/6W CARBON	
	R465	QRD167J-563	56K 1/6W CARBON	
	R466	QRD167J-563	56K 1/6W CARBON	
	R467	QRD167J-163	16K 1/6W CARBON	
	R468	QRD167J-163	16K 1/6W CARBON	
	R469	QRD167J-183	18K 1/6W CARBON	
	R470	QRD167J-183	18K 1/6W CARBON	
	R471	QRD167J-103	10K 1/6W CARBON	
	R472	QRD167J-103	10K 1/6W CARBON	
	R475	QRD167J-103	10K 1/6W CARBON	
	R476	QRD167J-103	10K 1/6W CARBON	
	R501	QRD167J-221	220 1/6W CARBON	
	R502	QRD167J-221	220 1/6W CARBON	
	R503	QRD167J-391	390 1/6W CARBON	
	R504	QRD167J-391	390 1/6W CARBON	
	R510	QRD167J-333	33K 1/6W CARBON	
	RA401	QRB049J-103	10K 1/10W R.NETWORK	
	RA402	QRB089J-103	10K 1/10W R.NETWORK	
	RA403	QRB049J-103	10K 1/10W R.NETWORK	
	VR111	QVPA601-501A	500 VARIABLE	
	VR112	QVPA601-501A	500 VARIABLE	
	VR113	QVPA601-104A	100K VARIABLE	
	VR114	QVPA601-104A	100K VARIABLE	
	VR141	QVPA601-501A	500 VARIABLE	
	VR142	QVPA601-501A	500 VARIABLE	
	VR143	QVPA601-104A	100K VARIABLE	
	VR144	QVPA601-104A	100K VARIABLE	
	VR185	QVPA601-503A	50K VARIABLE	
	VR186	QVPA601-503A	50K VARIABLE	
	VR301	QVPA601-203A	20K VARIABLE	
	VR302	QVPA601-203A	20K VARIABLE	
	VR451	QVPA603-103A	10K VARIABLE	
	VR452	QVPA603-203A	20K VARIABLE	

⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		ME11656-03B	WIRE KIT	A
		ME11656-03B	WIRE KIT	BS
		ME11656-03B	WIRE KIT	EF
		ME11656-03B	WIRE KIT	EN
		E3400-431	SPACER	G
		ME11656-03C	WIRE KIT	G
		QXT6100-015	S.TUBE	G
		E3400-431	SPACER	GI
		ME11656-03C	WIRE KIT	GI
		QXT6100-015	S.TUBE	GI
		ME11656-03D	WIRE KIT	U
		ME11656-03D	WIRE KIT	US
		ME11656-03D	WIRE KIT	UT
	J408	EMV5109-009A	PLUG ASSY (9PIN)	
	J409	EMV5109-009A	PLUG ASSY (9PIN)	
	J410	EMV5133-003	PLUG ASSY (2PIN)	
	J411	EMV5133-003	PLUG ASSY (2PIN)	
	K101	ENZ8101-007	INDUCTOR I.M	G
	K101	ENZ8101-007	INDUCTOR I.M	GI
	K102	ENZ8101-007	INDUCTOR I.M	G
	K102	ENZ8101-007	INDUCTOR I.M	GI
	K103	ENZ8101-007	INDUCTOR I.M	G
	K103	ENZ8101-007	INDUCTOR I.M	GI
	K104	ENZ8101-007	INDUCTOR I.M	G
	K104	ENZ8101-007	INDUCTOR I.M	GI
	K105	ENZ8101-007	INDUCTOR I.M	G
	K105	ENZ8101-007	INDUCTOR I.M	GI
	K106	ENZ8101-007	INDUCTOR I.M	G
	K106	ENZ8101-007	INDUCTOR I.M	GI
	K107	ENZ8101-007	INDUCTOR I.M	G
	K107	ENZ8101-007	INDUCTOR I.M	GI
	L109	EQL2106-223	INDUCTOR	
	L110	EQL2106-223	INDUCTOR	
	L151	EQL2106-223	INDUCTOR	
	L152	EQL2106-223	INDUCTOR	
	L301	ENZ2500-001	STEP UP COIL	
	L302	ENZ2500-001	STEP UP COIL	
	L351	ENZ6002-011	OSC COIL	
	L353	EQL4004-101	INDUCTOR	G
	L353	EQL4004-101	INDUCTOR	GI
	L354	EQL4004-101	INDUCTOR	G
	L354	EQL4004-101	INDUCTOR	GI
	L355	EQL4004-101	INDUCTOR	G
	L355	EQL4004-101	INDUCTOR	GI
	L356	EQL4004-1R0	INDUCTOR	G
	L356	EQL4004-1R0	INDUCTOR	GI
	P101	QMV5011-003K	PLUG ASSY (3PIN)	
	P102	QMV5011-007K	PLUG ASSY (7PIN)	
	S501	ESB1100-007	LEAF SWITCH (A PARK)	

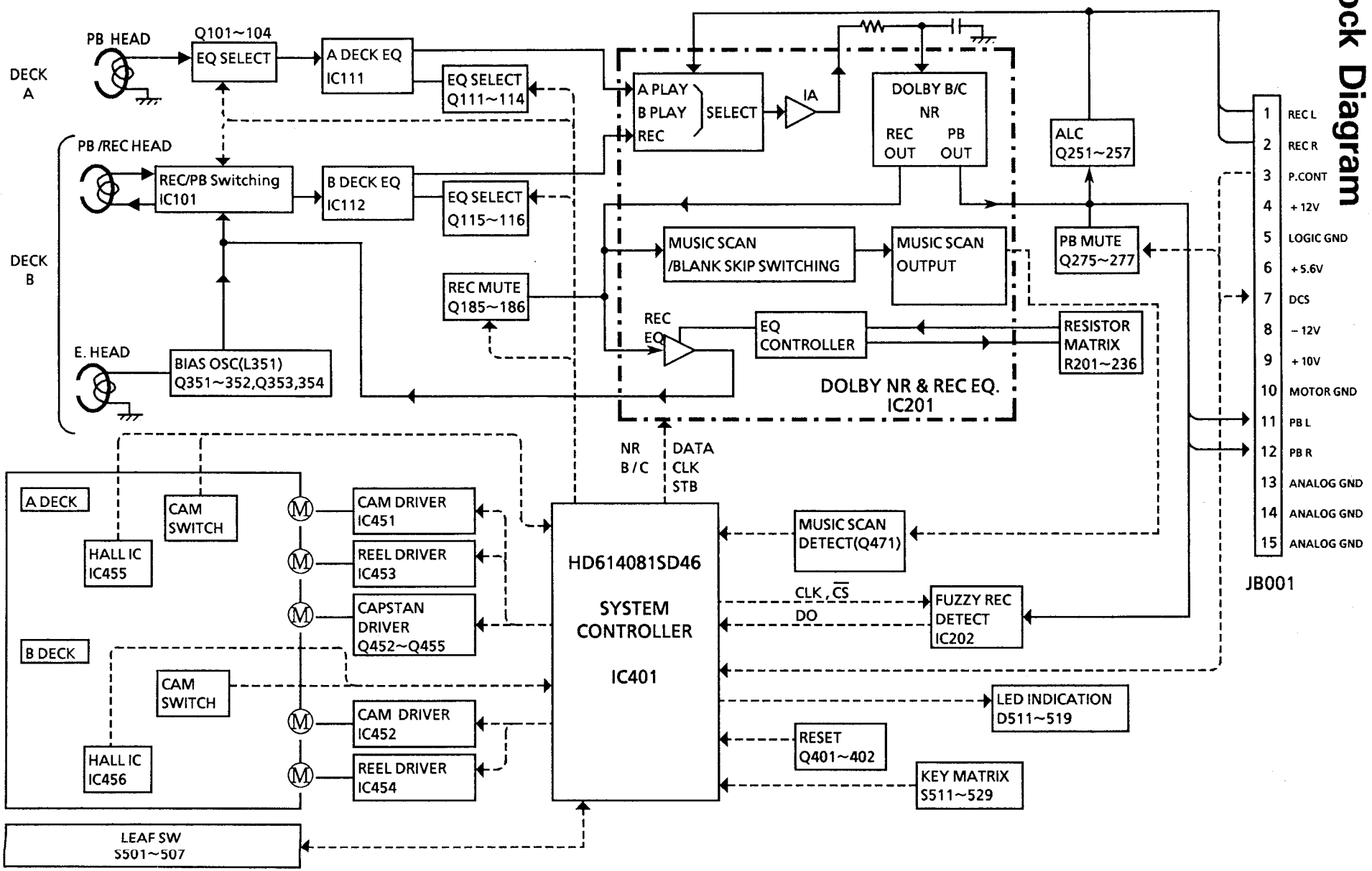
⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	S502	ESB1100-007	LEAF SWITCH(A Cro2)	
	S503	ESB1100-007	LEAF SWITCH(REV REC)	
	S504	ESB1100-007	LEAF SWITCH(B Cro2)	
	S505	ESB1100-007	LEAF SWITCH(B PARK)	
	S506	ESB1100-007	LEAF SWITCH(B METAL)	
	S507	ESB1100-007	LEAF SWITCH(■ FWD REC)	
	S511	ESP0001-023M	TACT SWITCH(A◀)	
	S512	ESP0001-023M	TACT SWITCH(A◀◀)	
	S513	ESP0001-023M	TACT SWITCH(A▶▶)	
	S514	ESP0001-023M	TACT SWITCH(A▶)	
	S515	ESP0001-023M	TACT SWITCH(B◀)	
	S516	ESP0001-023M	TACT SWITCH(B◀◀)	
	S517	ESP0001-023M	TACT SWITCH(B▶▶)	
	S518	ESP0001-023M	TACT SWITCH(B▶)	
	S519	ESP0001-023M	TACT SWITCH(A STOP)	
	S520	ESP0001-023M	TACT SWITCH(B STOP)	
	S521	ESP0001-023M	TACT SWITCH(B REC/REC MUTE)	
	S522	ESP0001-023M	TACT SWITCH(B PAUSE)	
	S523	ESP0001-023M	TACT SWITCH(A▶▶B)	
	S524	ESP0001-023M	TACT SWITCH(A▶B)	
	S525	ESP0001-023M	TACT SWITCH(B SKIP)	
	S526	ESP0001-023M	TACT SWITCH(FUZZY DIRECT)	
	S527	ESP0001-023M	TACT SWITCH(FUZZY AUTO)	
	S528	QSS4001-E01M	SLIDE SWITCH(REV MODE)	
	S529	QSS4001-E01M	SLIDE SWITCH(DOLBY MODE)	
	BC408	EWS269-A916	SOCKET WIRE(9PIN)	
	BC409	EWS269-A916	SOCKET WIRE(9PIN)	
	BC410	EWS243-054	SOCKET WIRE(2PIN)	
	BC411	EWS243-054	SOCKET WIRE(2PIN)	
	EP001	E70859-001	EARTH PLATE	
	FW401	EWR38B-16LST	FLAT WIRE(8PIN)	
	FW402	EWR37B-10LST	FLAT WIRE(7PIN)	
	FW403	EWR37B-10LST	FLAT WIRE(7PIN)	
	FW404	EWR37B-10LST	FLAT WIRE(7PIN)	
	FW405	EWR37B-10LST	FLAT WIRE(7PIN)	
	FW406	EWR38B-08LST	FLAT WIRE(8PIN)	
	FW407	EWR34B-08LST	FLAT WIRE(4PIN)	
	FW410	EWR38B-16SST	FLAT WIRE(8PIN)	
	JB001	EMV7141-015	CONNECTOR(15PIN)	
	JT411	EMV7122-004	CONNECTOR(4PIN)	
	JT412	EMV7122-004	CONNECTOR(4PIN)	
	JT413	EMV7122-103	CONNECTOR(3PIN)	
	JT414	EMV7122-004	CONNECTOR(4PIN)	
	JT415	EMV7122-004	CONNECTOR(4PIN)	
	JT416	EMV7122-103	CONNECTOR(3PIN)	
	SW341	QSS6A12-E01	SLIDE SWITCH(BEAT CUT SWITCH)	
	XT401	ECX0004-194KM	RESONATOR	

⚠ : SAFETY PARTS

Block Diagram



JVC-00977

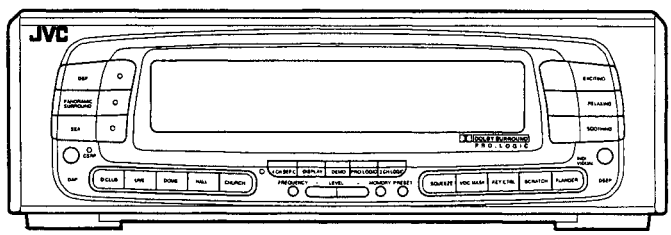
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

CA-MXG9BK/XT-MXG9BK

(Unit No. SE-MXG9BK)



Note 1. This manual is for one part of the titled model consisting of the plural units as detailed.

Unit No. Consisted	Part of Model	Manual No.
RX-MXG9BK	TUNER-AMPLIFIER	20434
SE-MXG9BK	S.E.A. GRAPHIC EQUALIZER	20435
XL-MXG9BK	COMPACT DISC PLAYER	20436
TD-MXG9BK	CASSETTE DECK	20437

2. RX-MXG9BK is needed for the power supply when servicing the unit not provided with the power (mains) cord.

3. For instruction manual, packing materials and accessories, please refer to the manual of *RX-MXG9BK.*

Contents

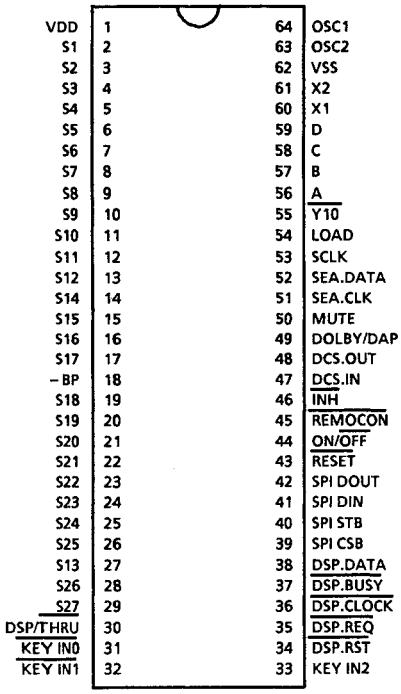
Description of Major LSIs *1-2*
Internal Connection of FL Display Tube .. *1-12*
Disassembly Procedures *1-13*
Block Diagrams *1-14*
Schematic Diagrams ..... *Insertion*
Printed Circuit Boards ..... *Insertion*
Parts List ..... *Separate-volum Insertion*

No. 20435
Jun. 1993

Description of ICs

■ MN171X02JHK (IC301) : System controller

1. Terminal Layout



2. Key matrix

	KEY IN0	KEY IN1	KEY IN2
Y0	–	4Ch / SEP.C	–
Y1	CSRP	DISPLAY	DSEP
Y2	SEA ON/OFF	DEMO	SOOTHING
Y3	FRONT DAP ON/OFF	PRO LOGIC	RELAXING
Y4	DSP ON/OFF	3Ch LOGIC	EXCITING
Y5	CHURCH	FREQUENCY	SQUEEZE
Y6	HALL	LEVEL –	VOC. MASK
Y7	DOME	LEVEL +	KEY CTRL
Y8	LIVE	MEMORY	SCRATCH
Y9	D. CLUB	PRESET	FLANGER

3. Decoder output of IC302

	$\overline{Y0}$	$\overline{Y1}$	$\overline{Y2}$	$\overline{Y3}$	$\overline{Y4}$	$\overline{Y5}$	$\overline{Y6}$	$\overline{Y7}$	$\overline{Y8}$	$\overline{Y9}$
DATA A (56PIN)	L	H	L	H	L	H	L	H	L	H
DATA B (57PIN)	L	L	H	H	L	L	H	H	L	L
DATA C (58PIN)	L	L	L	L	H	H	H	H	L	L
DATA D (59PIN)	L	L	L	L	L	L	L	L	H	H

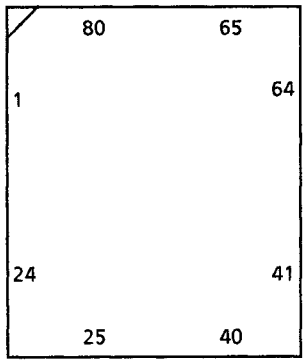
$\overline{Y0}$~$\overline{Y9}$ are the outputs of the shift register IC302.

4. Pin Functions

Pin No.	Symbol	I/O	Functions	Pin No.	Symbol	I/O	Functions
1	VDD	--	Power supply	44	ON/OFF	I	H : power on
2~17	S1~S17	O	Segment control	45	REMOCON	I	Remote control signal input
18		--	Power supply for FL display	46	INH	I	Inhibit signal input
19~29	S18~S27	O	Segment control	47,48	DCS.IN/OUT	I/O	Compulink signal
30	DSP/THRU		L : Pass the DSP circuit.	49	DOLBY/DAP	O	L : DAP
31~33	KEY IN0~2	I	Key matrix input	50	MUTE	O	H : Source direct on
34	DSP.RST	O	Reset signal for DSP μ-com	51	SEA.CLK	O	Clock signal for data transmission to IC251
35	DSP.REQ	O	Request signal for DSP μ-com	52	SEA.DATA	O	Data for IC104
36	DSP.CLOCK	O	Clock for data transmission to μ-com	53	SCLK	O	Clock for FL driver
37	DSP.BUSY	O	Data for sea	54	LOAD	O	Latch clock output of FL display data
38	DSP.DATA	O	DSP data signal output	55	Y10	O	FL grid output
39	SPI CSB	O	Chip select signal to IC251	56~59	A~D	O	Grid control/Key matrix output
40	SPI STB	O	Strobe signal for data transmission to IC251	60	X1	--	Connected to GND
41	SPI DIN	I	SPI data from IC251	61	X2	--	Non connection
42	SPI DOUT	O	Control data for IC251	62	VSS	--	GND
43	RESET	I	Reset signal	63,64	OSC2,1	--	Oscillation terminal

■ MN170801JPU (IC611) : DSP CONTROL μ-COM

1. Terminal Layput

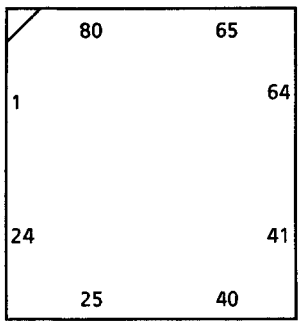


2. Pin Functions

Pin No.	Symbol	I/O	Functions	Pin No.	Symbol	I/O	Functions
1	P13	I	DSP data input from IC301 (DATA)	33	PA0	O	ROM address output
2	P20	I	DSP request input (REQ)	34	PA1	O	ROM address output
3	P21	--	Connect to 2pin	35	PA2	O	ROM address output
4	P22	I	Inhibit input	36	PA3	O	ROM address output
5	P23	--	Connect to 4pin	37	PB0	O	ROM address output
6	P30	--	Connect to +5V	38	PB1	O	ROM address output
7	P31	--	Connect to +5V	39	PB2	O	ROM address output
8	P32	--	Connect to +5V	40	PB3	--	Not used
9	P40	O	Reset signal for ADC	41	PC0	--	Not used
10	P41	--	Not used	42	PC1	--	Not used
11	P42	--	Not used	43	PC2	--	Not used
12	P43	--	Not used	44	PC3	--	Not used
13	P50	--	Not used	45	PD0	O	Reset signal for DSP IC (RES)
14	P51	--	Not used	46	PD1	O	Ready signal for DSP IC (SRDY)
15	P52	--	Not used	47	PD2	O	Request signal DSP IC (SIRQ)
16	P53	O	ROM chip select signal output (CE)	48	PD3	--	Not used
17	P60	I	ROM data input	49	PE0	O	DSP OFF : H (D.MUTE)
18	P61	I	ROM data input	50	PE1	O	Reset signal for DAC (DARST)
19	P62	I	ROM data input	51	RST	I	Reset signal input
20	P63	I	ROM data input	52	X1	--	Connect to +5V
21	P70	I	ROM data input	53	X2	--	Not used
22	P71	I	ROM data input	54	VDD	--	+5V
23	P72	I	ROM data input	55	OSC2	--	Oscillation terminal
24	P73	I	ROM data input	56	OSC1	--	Oscillation terminal
25	P80	O	ROM address output	57	VSS	--	GND
26	P81	O	ROM address output	58	P00	O	Strobe for IC201 (STB)
27	P82	O	ROM address output	59	P01	O	Serial data for IC605, 201 (SICK)
28	P83	O	ROM address output	60	P02	I	Ready signal input which indicates that the serial input is on the execution (SIRK)
29	P90	O	ROM address output	61	P03	O	Serial data for IC605, 201 (SI)
30	P91	O	ROM address output	62	P10	O	It is high while processing data (BUSY)
31	P92	O	ROM address output	63	P11	I	Clock input (CLK)
32	P93	O	ROM address output	64	P12	I	DSP data input from IC301 (DATA)

■ LC83016E (IC605) : DSP (Digital Signal Processor)

1. Terminal Layout

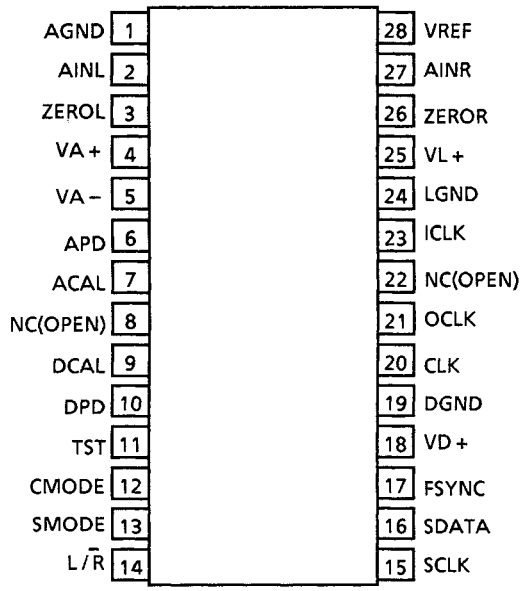


2. Pin Functions

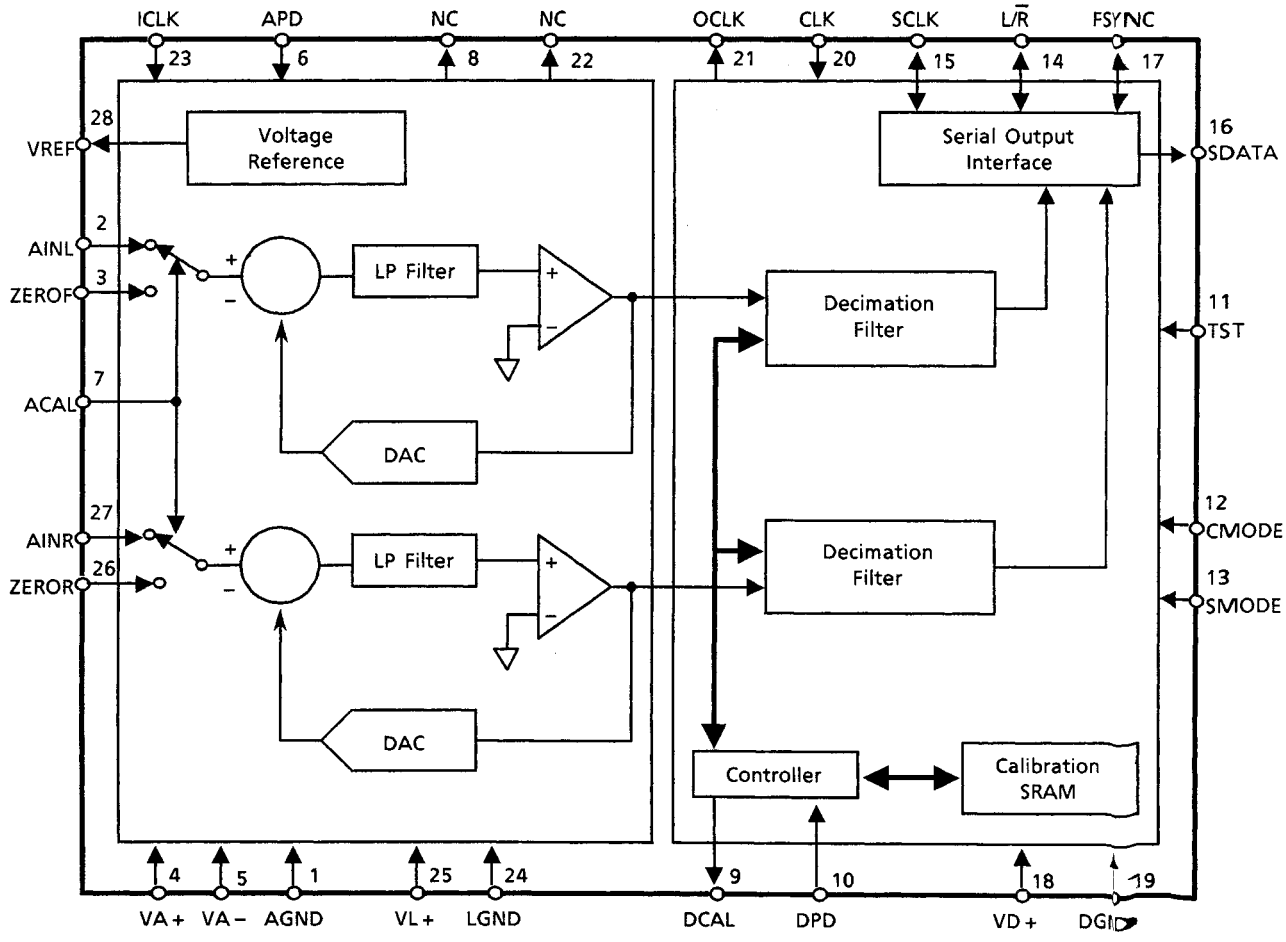
Pin No.	Symbol	I/O	Functions
1~6	P0~P5	--	Not used
7	ASI1	I	Audio data serial 1 input terminal
8	BCK1	I	Bit clock for ASI 1 input
9	FS3841	--	Not used
10	LRCKI	I	L/R channel selectable signal input. (L : R-ch , H : L-ch)
11	ASI2	--	Connected to GND
12	BCK2	I	Bit clock for ASI 2 input
13, 51, 77	VDD1,2,3	--	Power supply (+5V)
14~17,19	TEST1~5	--	Connected to GND
18, 33, 54, 74	VSS1,2,3,4	--	Connected to GND
20	$\overline{RAS}$	O	ROW ADDRESS STROBE : Signal output when accessing external D-RAM
21	$\overline{CAS}$	O	COLUMN ADDRESS STROBE : Signal output when accessing external D-RAM
22	$\overline{DWRT}$	O	Data write signal output when accessing external D-RAM
23	$\overline{DREAD}$	O	Data read signal output when accessing external D-RAM
24	$\overline{CE}$/CS	--	Not used
32~25	D0~D7	I/O	Data input / output between external D-RAM and these pins
34~41	A0~A7	O	Address output for external D-RAM
42~50	A8~A16	--	Not used
52	OSC1	I	External clock input. (384fs)
53	OSC2	O	External clock output
55	FS384O	O	384fs or 512fs output
56	FS192O	O	192fs or 256fs output
57,58	FS128O,FS64O	--	Not used
59	FS32O	O	32fs or 16fs output
60	LRCKO	O	L/R channel selectable signal output. (L : R-ch , H : L-ch)
61,62	AOWCK,ASO	--	Not used
63	AOTDF1	O	Audio data serial 1 output terminal
64	AOTDF2	O	Audio data serial 2 output terminal
65	SI	I	Serial clock input for SI input
66	SICK	I	Serial data input from control micro computer
67	$\overline{SIRQ}$	I	Request signal input for serial input
68	$\overline{SIAK}$	O	Signal output which indicates that the serial input is on the execution
69	$\overline{SRDY}$	I	Ready signal input which indicates that the serial data input from control micro computer is an end
70,71,72	SO,SOCK,$\overline{SORQ}$,$\overline{SOAK}$	--	Not used
75	$\overline{RES}$	I	Reset input
76	$\overline{INT}$	I	Interrupt request signal input
78,79,80	$\overline{SELC}$,$\overline{SACK1}$,$\overline{SACK2}$	--	Connected to GND

■ CS5339-KS (IC604) : Analog to Digital Converter

1. Terminal layout

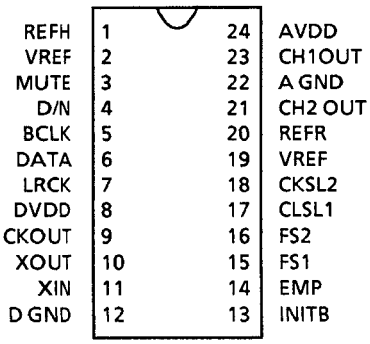


2. Block diagram

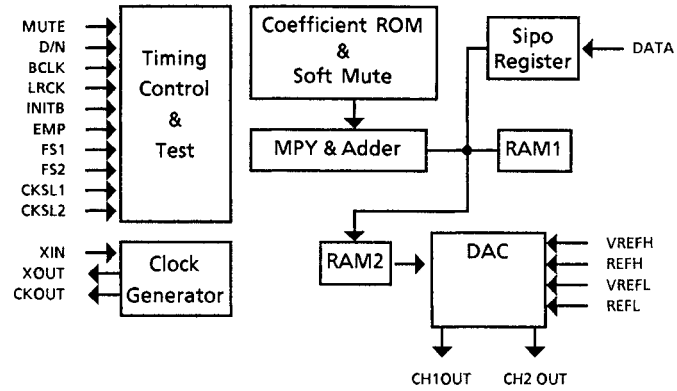


■ LC78835MX (IC608,609) : 8-Times Oversampling · 18-Bit D/A Converter

1. Terminal Layout



2. Block Diaglam



3. Pin Functions

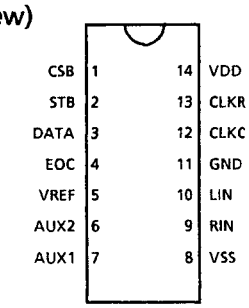
Pin No.	Symbol	I/O	Functions
1	REFH	I	Reference voltage terminal
2	VREFH	I	Reference voltage terminal
3	MUTE	I	Mute sigmal input
4	D/N	--	Connected to ground
5	BCLK	I	Bit clock input
6	DATA	I	Digital audio data input
7	LRCK	I	LR clock input (H : CH1, L : CH2)
8	DVDD	--	Power supply for the digital section
9	CKOUT	--	Connected to ground
10	XOUT	--	Connected to ground
11	XIN	I	Oscillation terminal
12	DGND	--	Digital ground
13	INITB	I	Internal circuit is initialized by this signal
14	EMP	--	Connected to ground
15	FS1	--	Connected to ground
16	FS2	--	Connected to +5V
17, 18	CKSL1, CKSL2	--	Connected to +5V
19	VREFL	--	Connected to ground
20	REFL	I	Reference voltage terminal
21	CH2 OUT	O	Analog output terminal
22	AGND	--	Analog ground
23	CH1 OUT	O	Analog output terminal
24	AVDD	--	Power supply for the Analog section

■ XR1097CP (IC251) : 7-Channel Graphic Equalizer Filter With A/D Converter

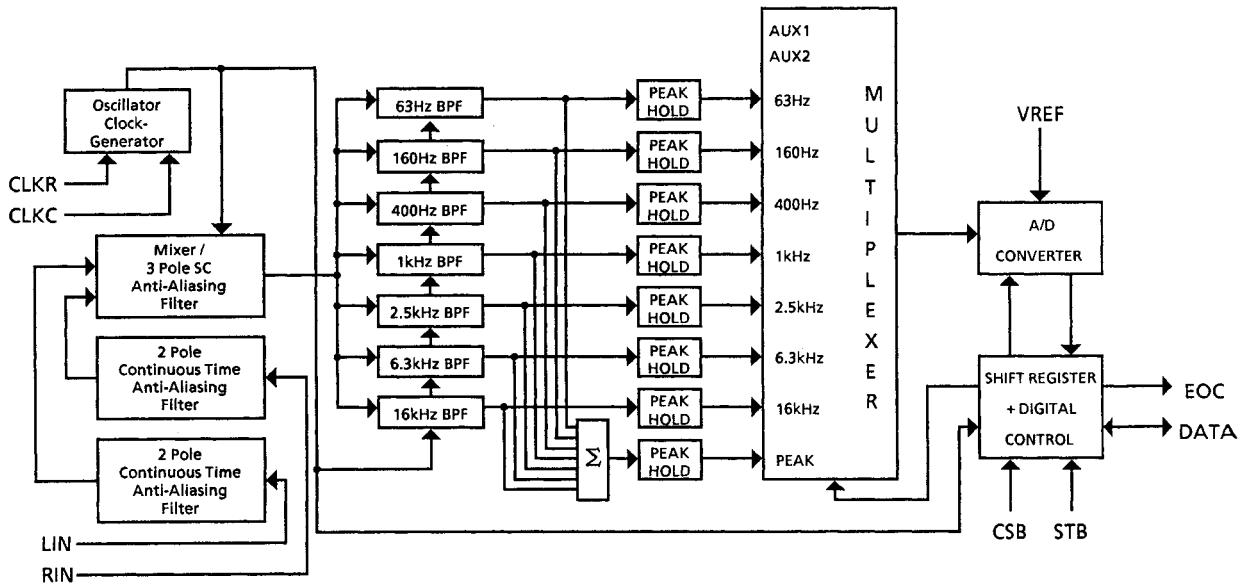
1. The main function descriptions

(1) Internal R/C Oscillator
(2) Provides seven fillters in one 14-pin package
(3) Dual inputs for summing Left and Right Channels
(4) Provides 30dB of Gain
(5) Two auxilialy inputs
(6) Microprocessor Bus interface
(7) On Chip A/D Converter

2. Terminal Layout (Top View)



3. Block Diagram

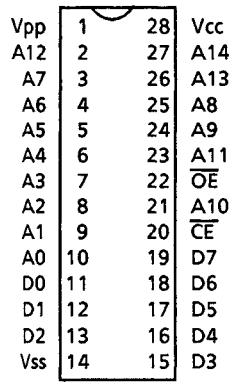


4. Pin Functions

Pin No.	Symbol	I/O	Functions
1	CSB	I	Chip select pin
2	STB	I	Clock pin to shift in / out data through the serial port.
3	DATA	I	Serial port for digital signals to and from microprocessor.
4	EOC	O	End of conversion pin.
5	VREF	I	A/D Converter reference voltage input.
6	AUX2	I	Auxiliary input 2.
7	AUX1	I	Auxiliary input 1.
8	VSS	--	Negative supply voltage. (−5.7V)
9	RIN	I	Right channel input.
10	LIN	I	Left channel input.
11	GND	--	Ground
12	CLKC	I	Clock capasitor from this pin to GND.
13	CLKR	I	Clock resistor from this pin to CLKC.
14	VDD	--	Positive supply voltage. (+5.6V)

■ LH5359MK (IC610) : ROM

1. Terminal Layout

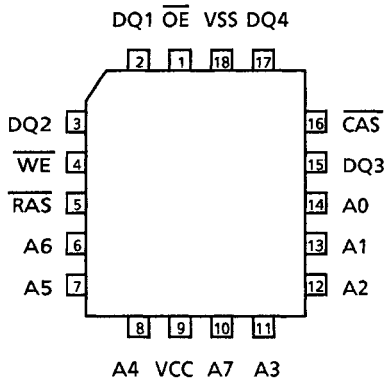


2. Pin Functions

Symbol	Functions
A0~A14	Address inputs
O0~O7	Data outputs
$\overline{CE}$	Chip enable
$\overline{OE}$	Output enable
Vpp	Program power supply
Vcc	Power supply (+5V)
GND	GND (0V)

■ MN41464AJ-08W (IC606,607) : RAM

1. Terminal Layout

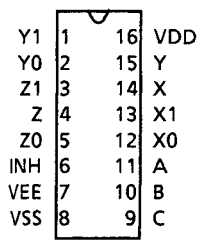


2. Pin Functions

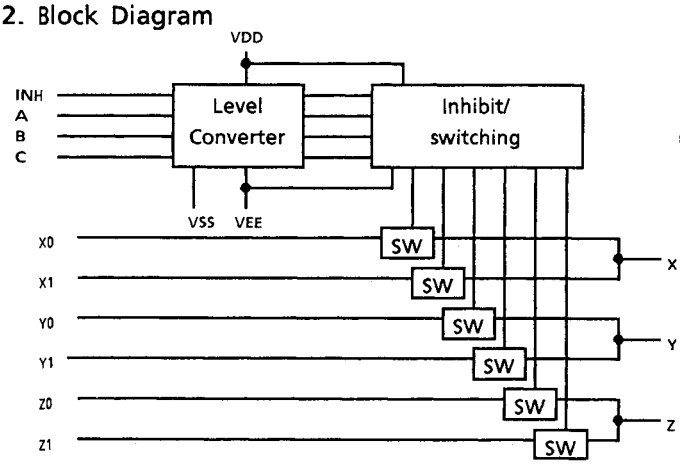
Symbol	Functions
A0~A7	Address inputs
$\overline{RAS}$	Row Address Strobe
$\overline{CAS}$	Column Address Strobe
$\overline{WE}$	Write enable
$\overline{OE}$	Output enable
DQ 1~DQ 4	Data input/output
Vcc	Power supply (+5V)
Vss	GND (0V)

■ μPD4053BC (IC111) : 2CH -Multiplexer

1. Terminal Layout



2. Block Diagram

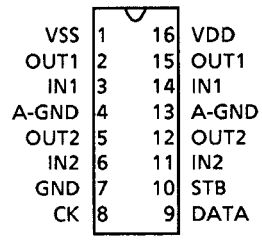


3. Function Table

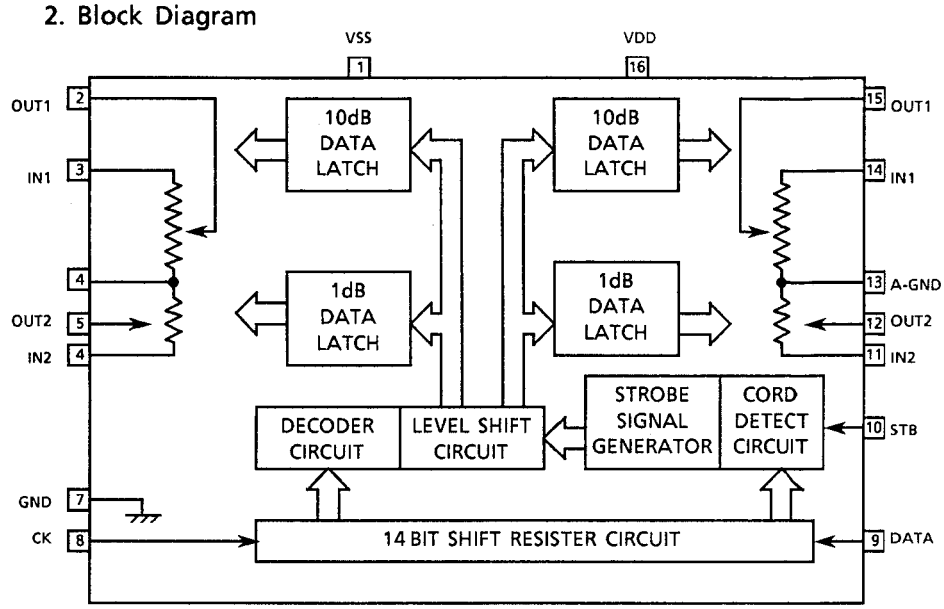
Control input				ON channel
INH	C	B	A	
L	L	L	L	Z0, Y0, X0
L	L	L	H	Z0, Y0, X1
L	L	H	L	Z0, Y1, X0
L	L	H	H	Z0, Y1, X1
L	H	L	L	Z1, Y0, X0
L	H	L	H	Z1, Y0, X1
L	H	H	L	Z1, Y1, X0
L	H	H	H	Z1, Y1, X1
H	×	×	×	NONE

■ TC9213P (IC201) : Volume Controller

1. Terminal Layout

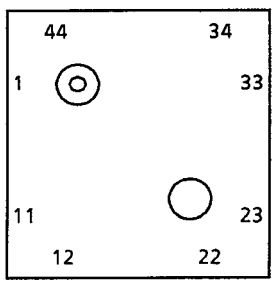


2. Block Diagram



■ MSC7112-01GS-V1K (IC305) : Flourescent Dispaly Driver

1. Terminal Layout

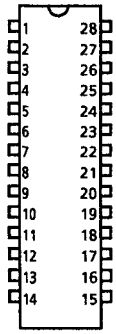


2. Pin Functions

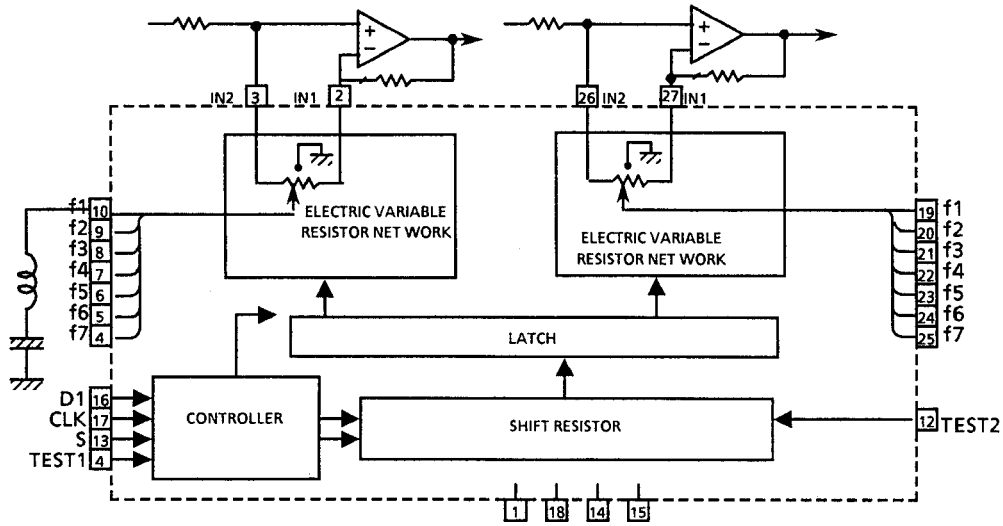
Pin No.	Pin Name	I/O	Functions
33~38,40~44,1	D1~D12	O	FL display tube drive signal.
2	AI	O	LED output
3	F.DSP	O	LED output
4	SEA	O	LED output
5	DSP	O	LED output
6	4ch DSP	O	LED output
7	VSS	–	GND
8,17,39	VEE	–	Power supply for the FL driver circuit (-30V)
9~16, 18~25	SEG A~O	O	FL display tube drive signal
26	SCLK	I	Clock signal to the shift register
27	DATA IN	I	Displa data to the sshift register
28	LOAD	I	Clock signal for the display data
29 30	OSC I OSC O	I O	Input to the oscillator circuit. Oscillator circuit is made up by connecting an external capacitor and resistor
31	POR	I	Reset signal input to the internal logic circuit when turning on
32	VDD	–	Power supply

■ LC7522 (IC141) : Variable Resistor for SEA Control

1. Terminal Layout



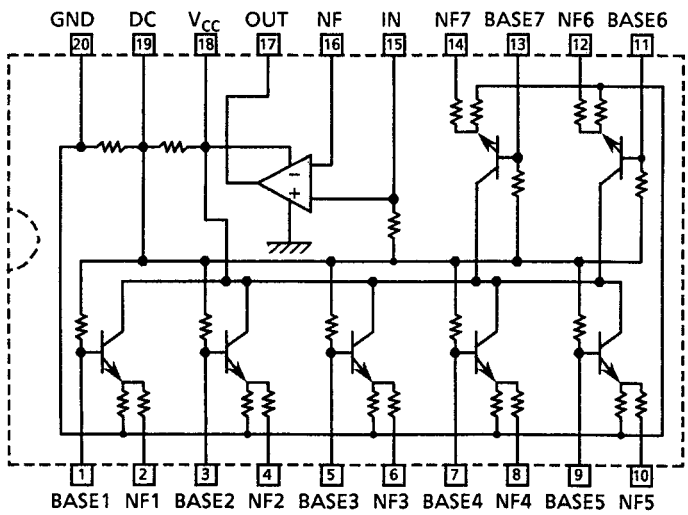
2. Block Diagram



3. Pin Funtions

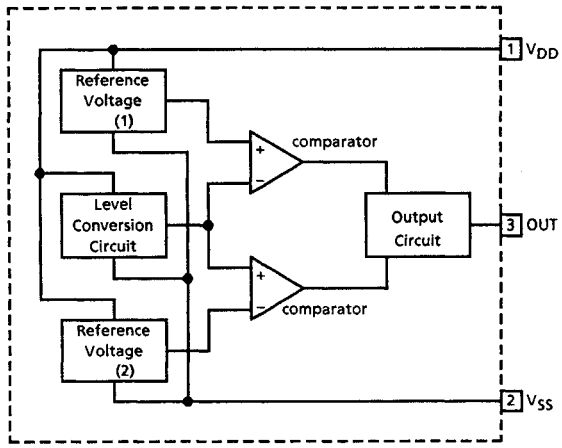
Pin No.	Symbol	Functions
1 18 14 15	V_{DD} VSS VEE VCC	Power supply +7V for audio signal Ground . Power supply −7V for audio signal. Power supply +5V
2,27 3, 26	IN 1 IN 2	Audio signal input The inversion signal of the operational amplifier inputs to IN 1 normally. The non-inversion signal of the operational amplifier inputs to IN 2 normally.
16	SDA	Data input from the CPU. Schmitt inverter type
17	SCK	Clock signal input from the CPU. Schmitt inverter type
4~10 19~25	f1~f7	For connecting to band-pass filter. f1~f7x2 (Left and Right)
11 12	TEST 1 TEST 2	Not used Not used
13	S	Chip Select
28	NC	Not used

■ LA3607S (IC151,152) : S.E.A. Graphic Equalizer
It makes inductive characteristic instead of coil.



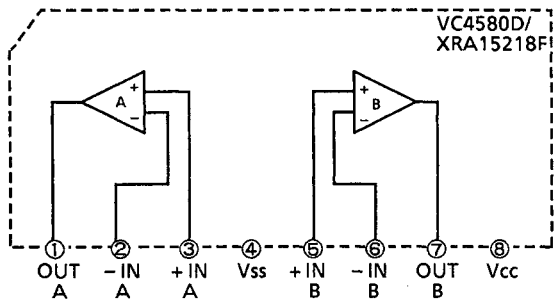
■ MN1281 (P.Q). : IC341 (Reset IC)

Block Diagram

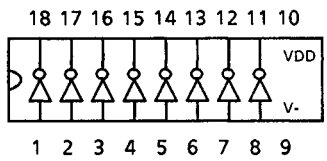


Pin No.	Symbol	Functions
1	V_{DD}	Power supply
2	V_{SS}	Ground
3	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.

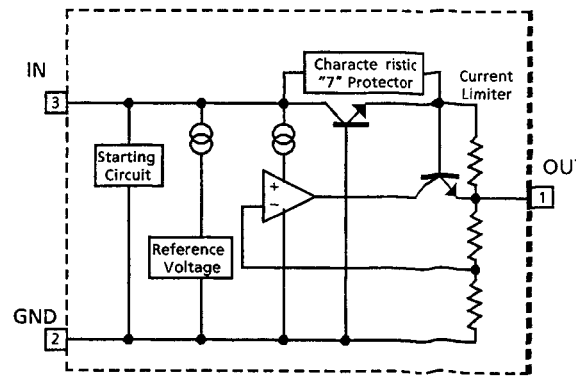
■ VC4580D / XRA15218F (IC101,121,191,202,221,601,602,603) : Dual OP Amp.



■ AN6873S (IC303,304) : Inverter for FL drive



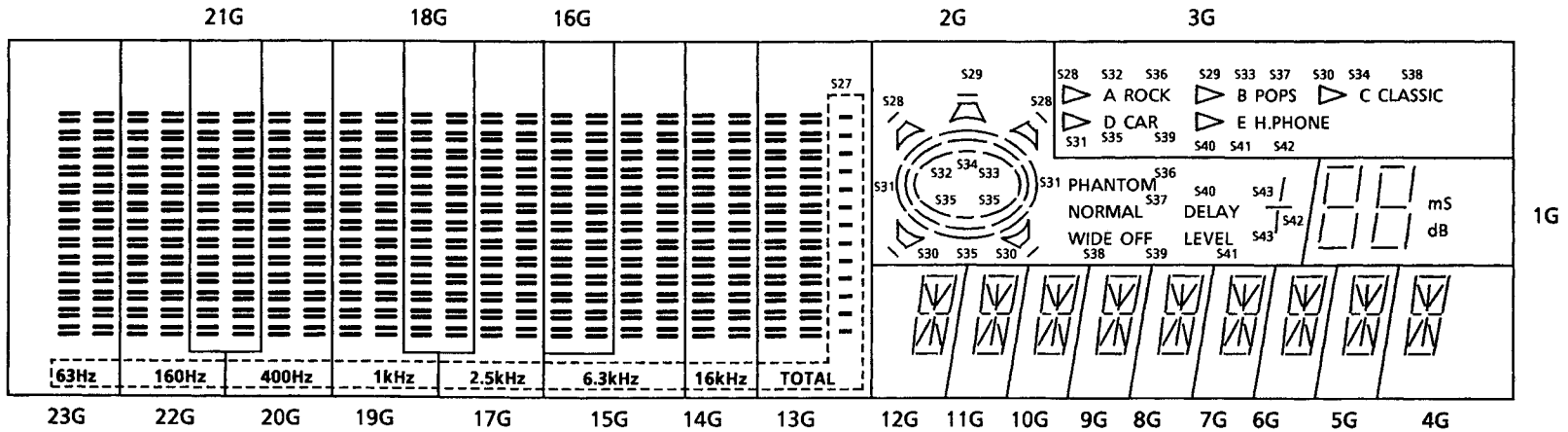
■ NJM78M05FD / NJM78L05UA (IC281,651,652,653) : Regulator

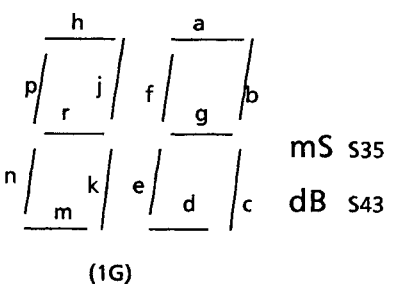


Internal Wiring of FL Display

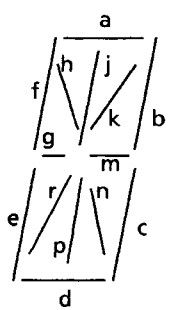
■ ELU-0001-141 (FL901)

Terminal Layout

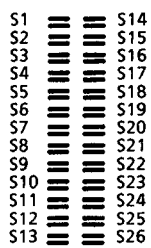




(1G)



(4G~12G)



(13G~23G)

Pin Connection

	S28	S29	S30	S31	S32	S33	S34	S35
12G~4G	a	b	c	d	e	f	g	h
1G	a	b	c	d	e	f	g	mS
	S36	S37	S38	S39	S40	S41	S42	S43
12G~4G	j	k	m	n	p	r	–	–
1G	h	j	k	m	n	p	r	dB

Pin Connection

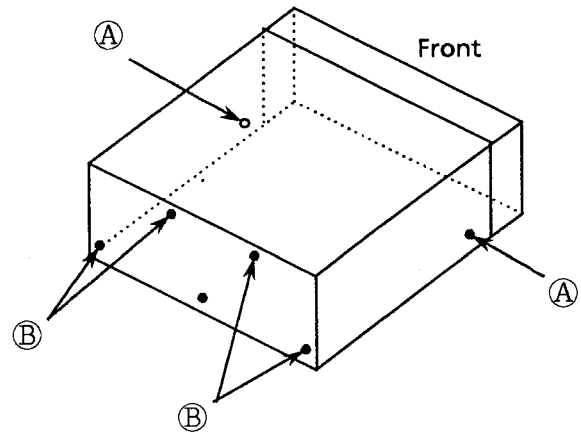
Terminal No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Electrede	F1	F1	F1	NP	NP	23G	22G	21G	20G	19G	18G	17G	16G	15G	14G	13G	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Terminal No.	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
Electrede	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	NP	NP	12G	11G	10G	IC	IC	IC	9G	8G	7G	6G	5G	4G	3G	2G	1G	P28
Terminal No.	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82											
Electrede	P29	P30	P31	P32	P33	P34	P35	P36	P37	P38	P39	P40	P41	P42	P43	NP	NP	F2	F2	F2											

F : Filament G : Grid P : Anode NP : No Pin IC : Internally Connected Pin

Disassembly Procedures

■ Removing the metal cover

1. Remove the 2 screws Ⓐ fastening the both sides of the metal cover and 4 screws Ⓑ fixing the back of the cover to remove the cover.



■ Removing the front panel assembly

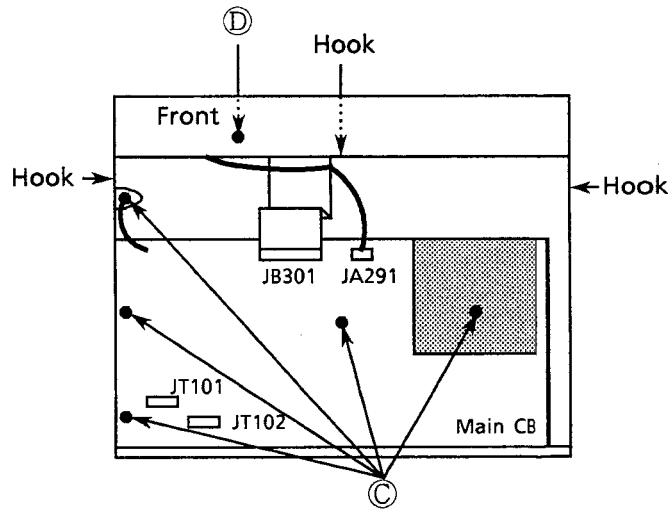
1. Remove the metal cover.
2. Remove the screw Ⓓ and release the 3 hooks to remove the assembly. (If necessary, disconnect the connectors.)

■ Removing the DSP circuit board

1. Removing the 3 fasteners to remove the circuit board. (If necessary, disconnect the connector.)

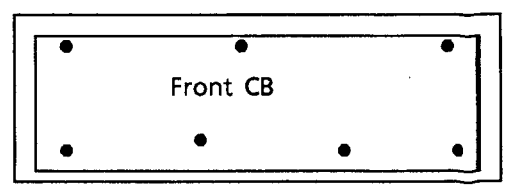
■ Removing the main circuit board

1. Disconnect the connectors JT101, JT102, JA291 and JB301.
2. Remove the 5 screws Ⓒ to remove the circuit board.



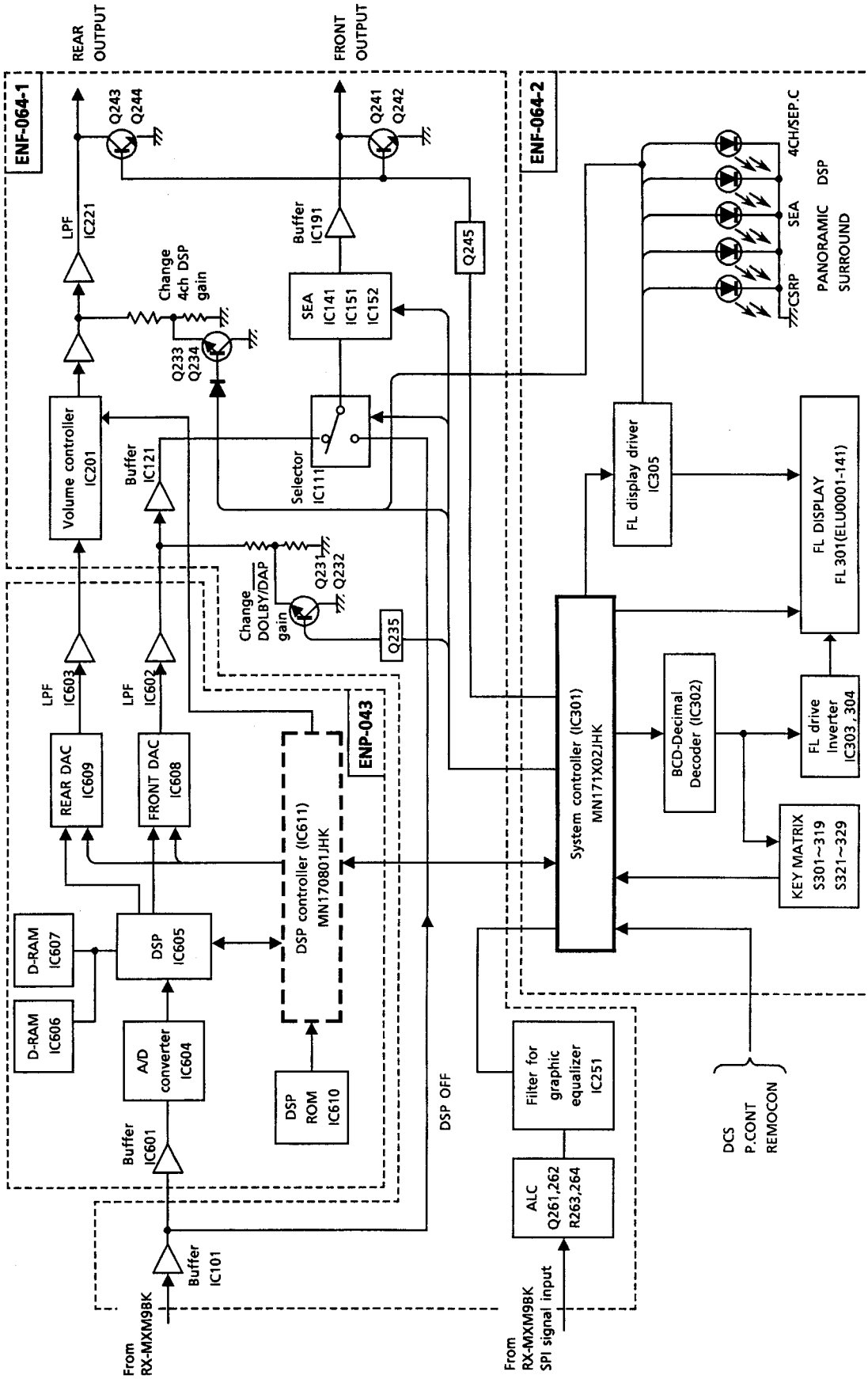
■ Removing the front circuit board

1. Remove the front panel assembly.
2. Remove the 7 screws fixng the circuit board to remove the circuit board.

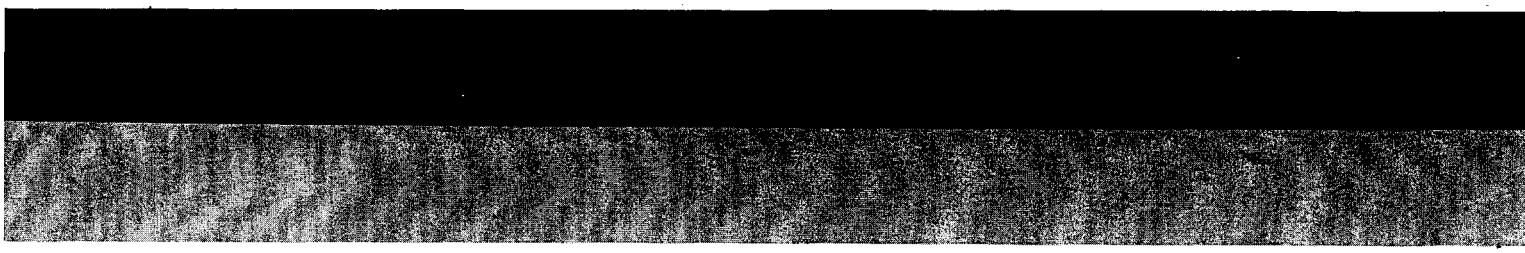


Front panel assembly

Block Diagram



SE-MXG9BK



JVC

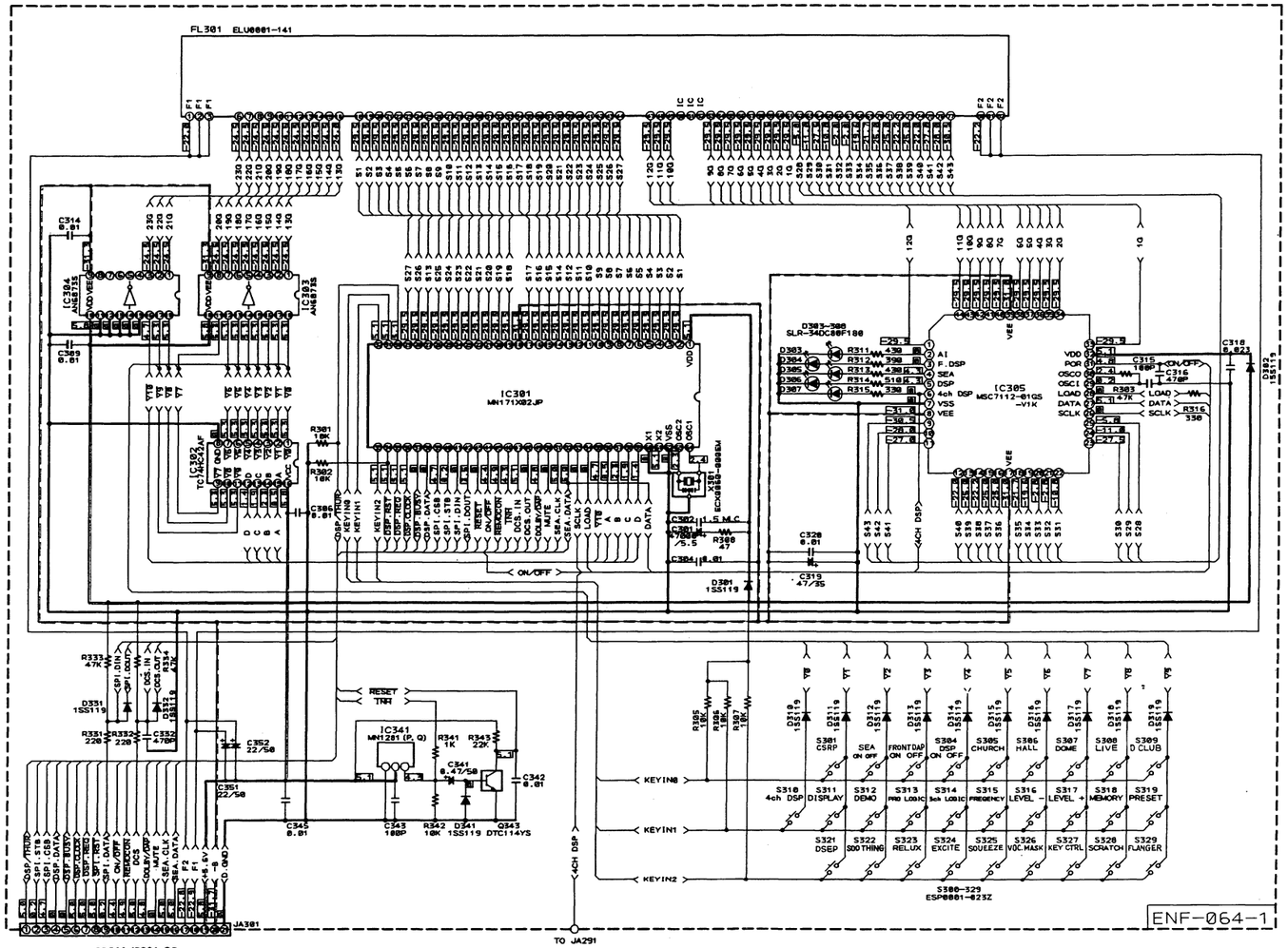
VICTOR COMPANY OF JAPAN, LIMITED
AUDIO PRODUCTS DIVISION, 1644, Shimotsuruma, Yamato-shi, Kanagawa-ken, 242, JAPAN

(No.20435)

306 (S)

Schematic Diagrams

(1) Front Section



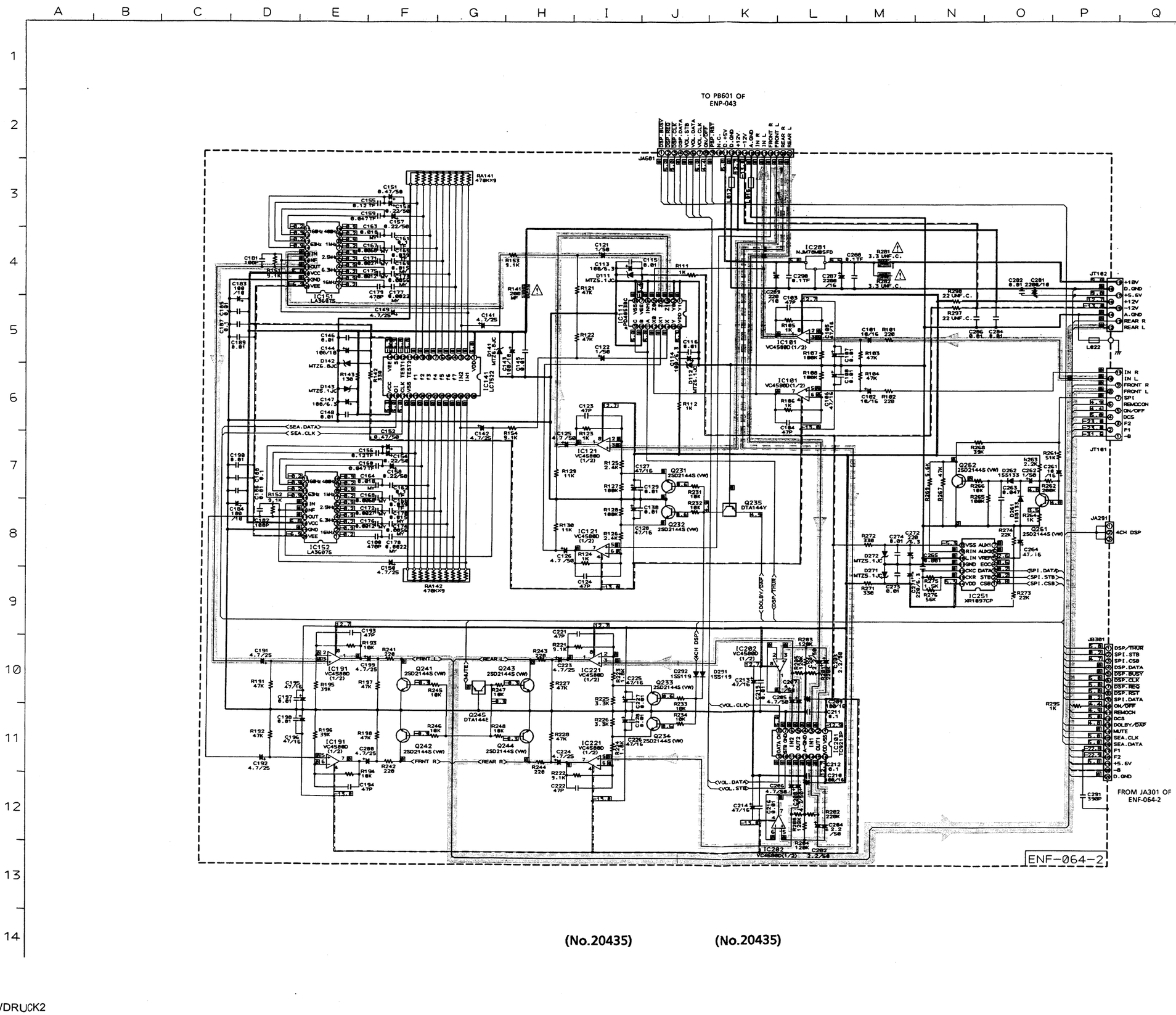
* The voltages on the diagram of ENF-064-1 are measured on the following conditions.
DSP ON : DOLBY PRO LOGIC CENTER MODE NORMAL
SEA ON : FLAT
The other ones are measured on the conditions of DSP and SEA off.

Notes:

1. ——— indicates + B power supply.
2. - - - - indicates – B power supply.
3. ▒▒▒▒ indicates main signal path.
4. ▒▒▒▒ indicates left signal path for front or rear surround and center signal path for dolby pro-logic.
5. ▒▒▒▒ indicates right signal path for front or rear surround and surround signal path for dolby pro-logic.
6. When replacing the parts in the shaded are (▒▒▒▒) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
7. The design and contents are subject to change without notice.

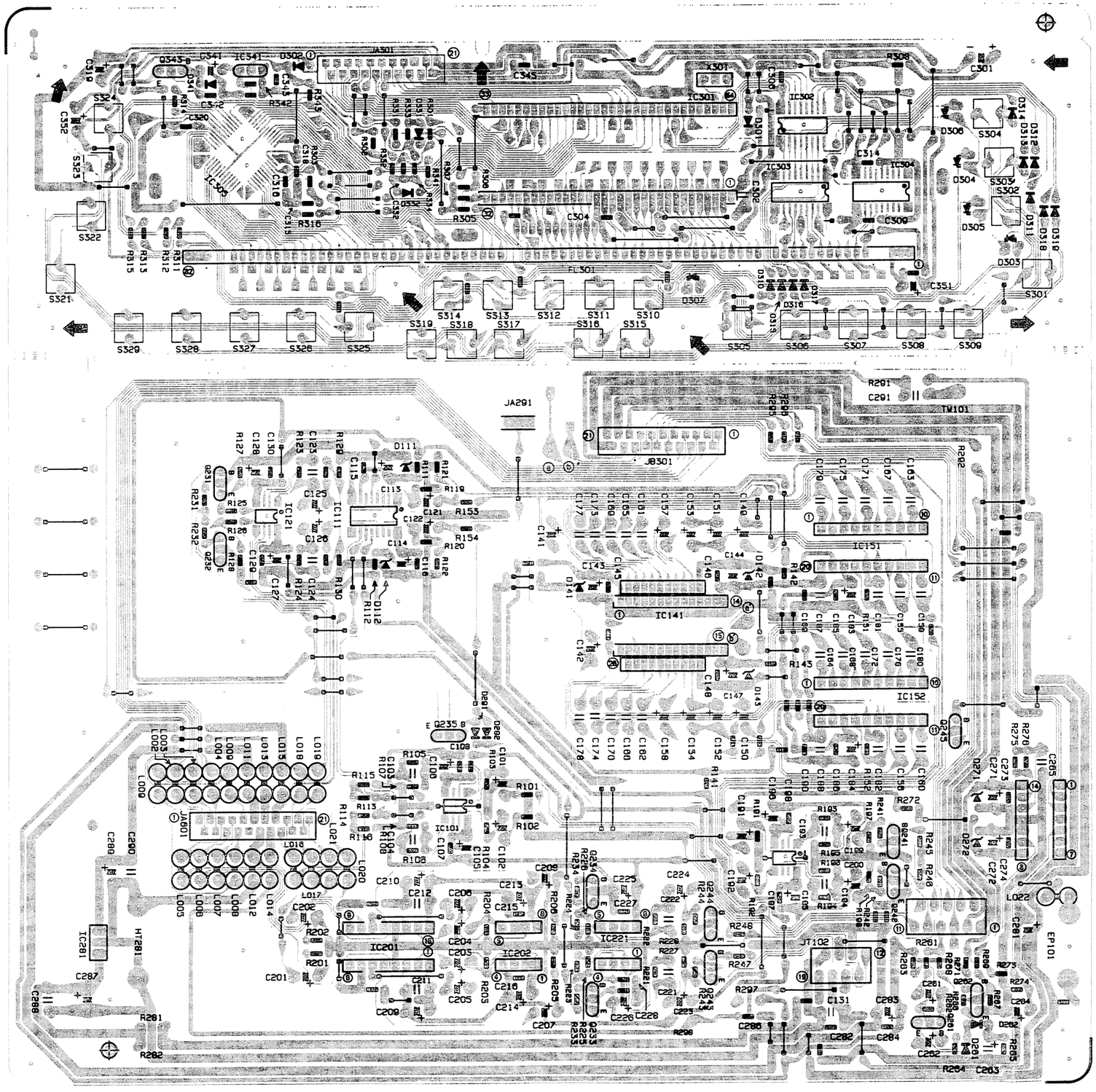
(No.20435)

(2) Input/Output Section

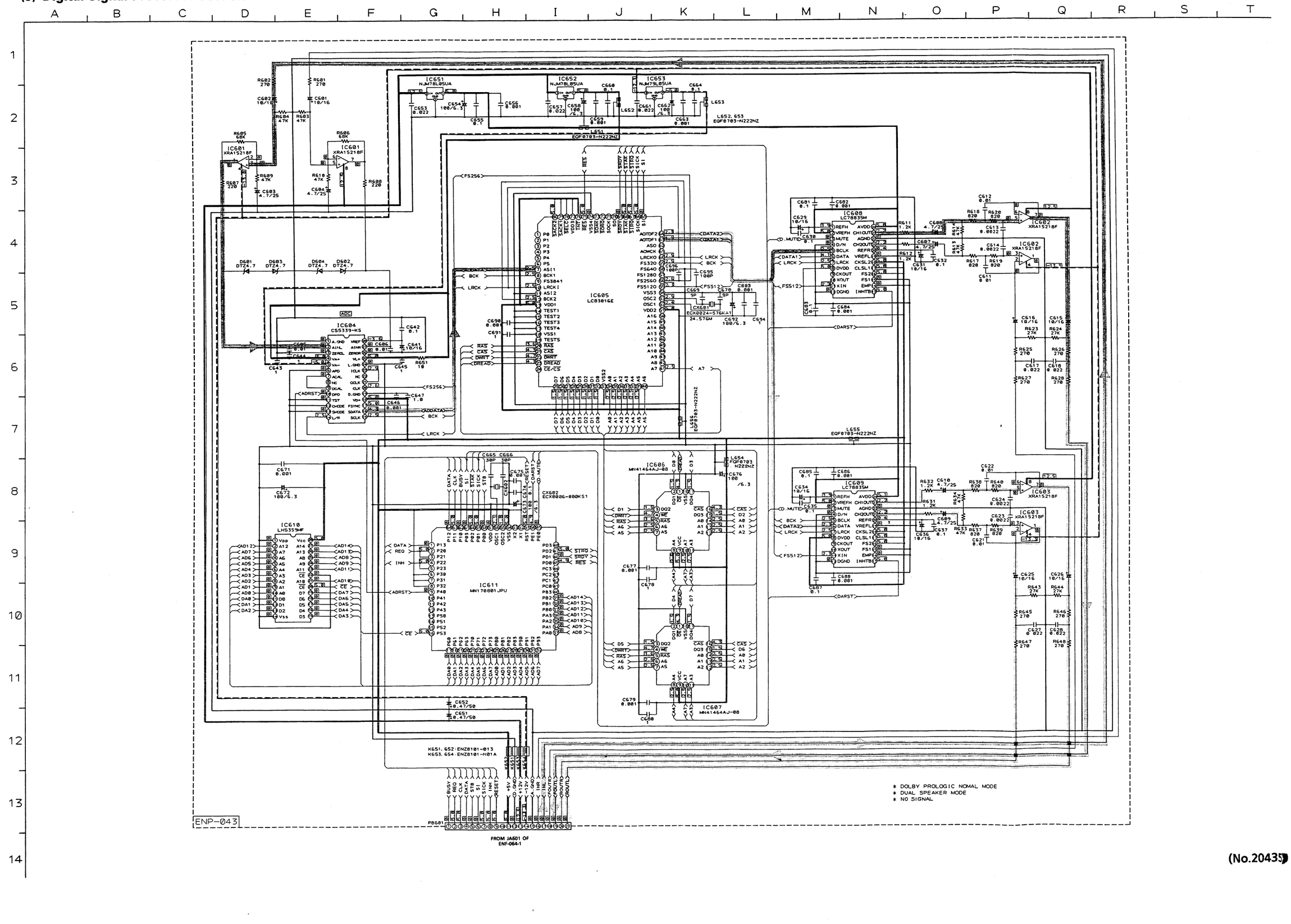


(No.20435) (No.20435)

(2) Front & Main P.C. Board (ENF-064)

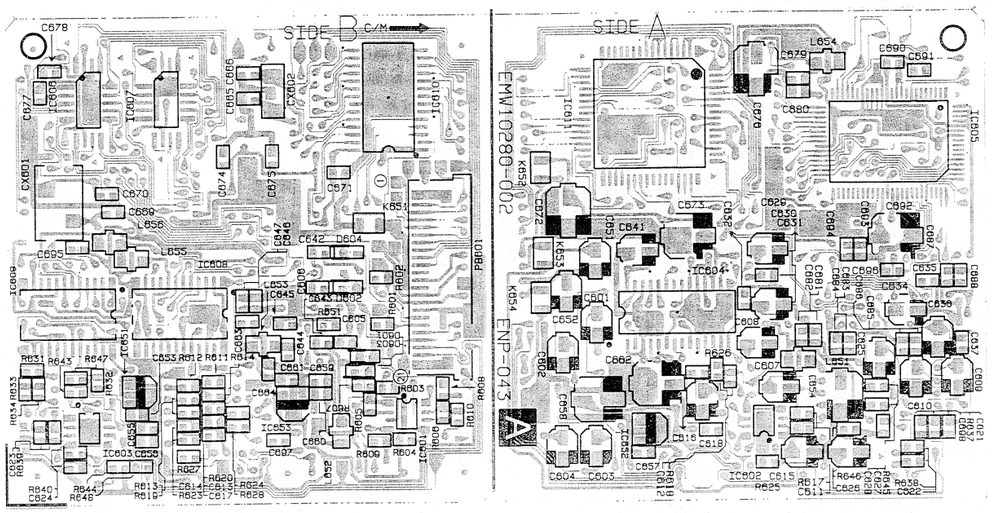


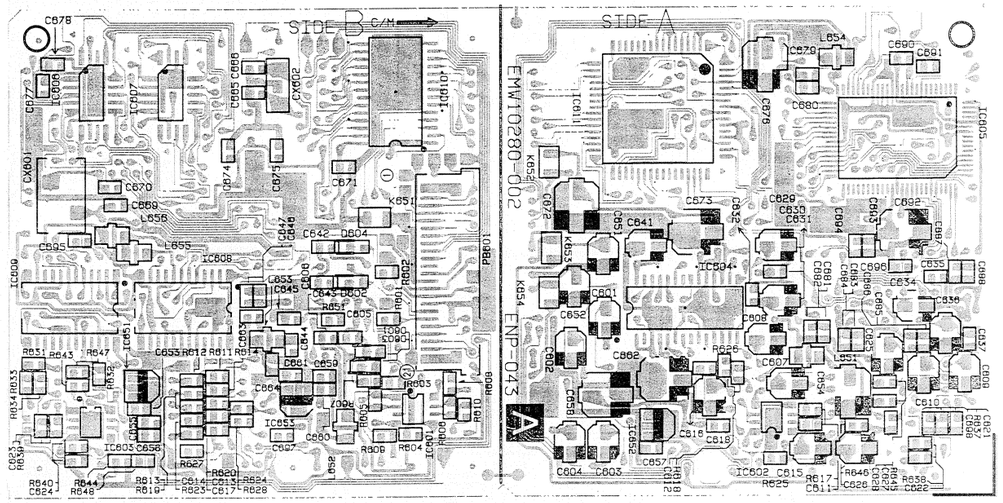
(3) Digital Signal Processor Section



Printed Circuit Boards

(1) Digital Signal Processor P.C. Board (ENP-043)





JVC-00977/DRUCK4

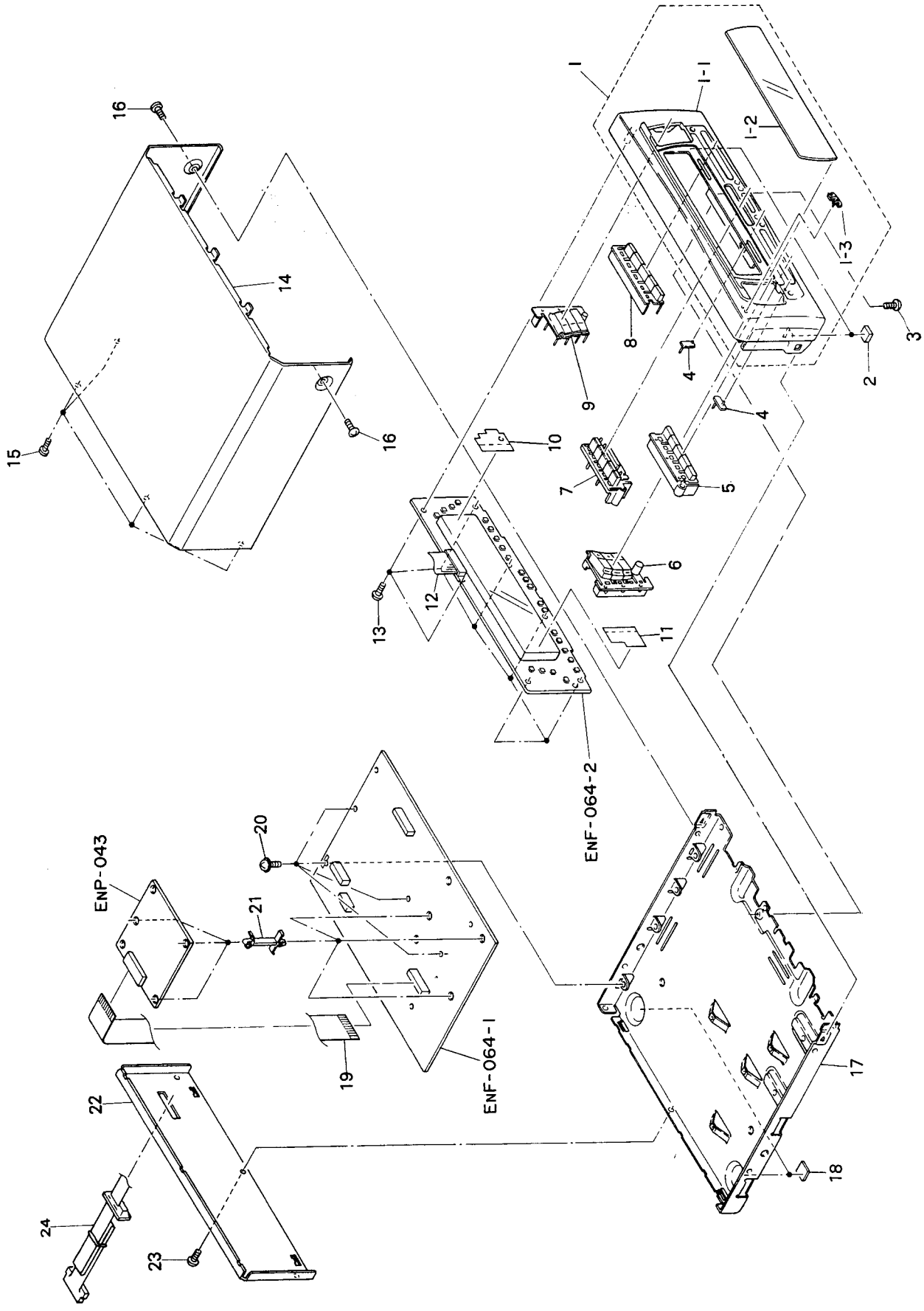
PARTS LIST

Note : All printed circuit boards and its assemblies are not available as service parts.

Contents

General Exploded View and Parts List 2-2
Printed Circuit Board Ass'y and Parts List 2-6
■ ENF-064 ☐ Front & Main PC Board Ass'y 2-8
■ ENP-043 A Digital Signal Processor PC Board Ass'y 2-9

General Exploded View and Parts List



■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-SEMXG9BKE (S	FRONT PANEL ASSY	1		
	1-1	E102628-007	FRONT PANEL	1		
	1-2	E207611-003	WINDOW SCREEN	1		
	1-3	E406971-221	JVC MARK	1		
	2	E406855-008	SPACER	1	FRONT FOOT	
	3	E74304-001	SPECIAL SCREW	1		
	4	E406673-001	INDICATOR	2		
	5	E207618-004	PUSH BUTTON	1		
	6	E207613-004	PUSH BUTTON ASSY	1		
	7	E207622-002	PUSH BUTTON	1		
	8	E207620-003	PUSH BUTTON	1		
	9	E207616-003	PUSH BUTTON	1		
	10	E407365-001	SPACER	1		
	11	E407364-001	SPACER	1		
	12	E407363-002	FFC CABLE	1		
	13	SDSF2608Z	SCREW	7		
	14	E207626-001	METAL COVER	1		
	15	E73273-003	SPECIAL SCREW	4		
	16	SDSG3008M	SCREW	2		
	17	E102462-001	CHASSIS BASE	1		
	18	E406855-005	SPACER	1	REAR FOOT	
	19	EWR121E-06TT	FLAT WIRE	1		
	20	GBSG3008CC	SCREW	5		
	21	E24624-001	FASTENER	1		
	22	E207624-005	REAR PANEL	1		U
		E207624-005	REAR PANEL	1		US
		E207624-005	REAR PANEL	1		UT
		E207624-006	REAR PANEL	1		A
		E207624-006	REAR PANEL	1		BS
		E207624-006	REAR PANEL	1		EF
		E207624-006	REAR PANEL	1		EN
		E207624-006	REAR PANEL	1		G
		E207624-006	REAR PANEL	1		GI
	23	SBSG3008CC	SCREW	1		
	24	EWP902-032	FLAT WIRE ASSY	1		
	—	E61029-011	NUMBER LABEL	1		

⚠ SAFETY PARTS

The Marks for Designated Areas

A	Australia	EN	Scandinavia	EF	Continental Europe
BS	the U.K.	G	Germany	GI	Itary
UT	Taiwan	US	Singapore	U	Universal Type

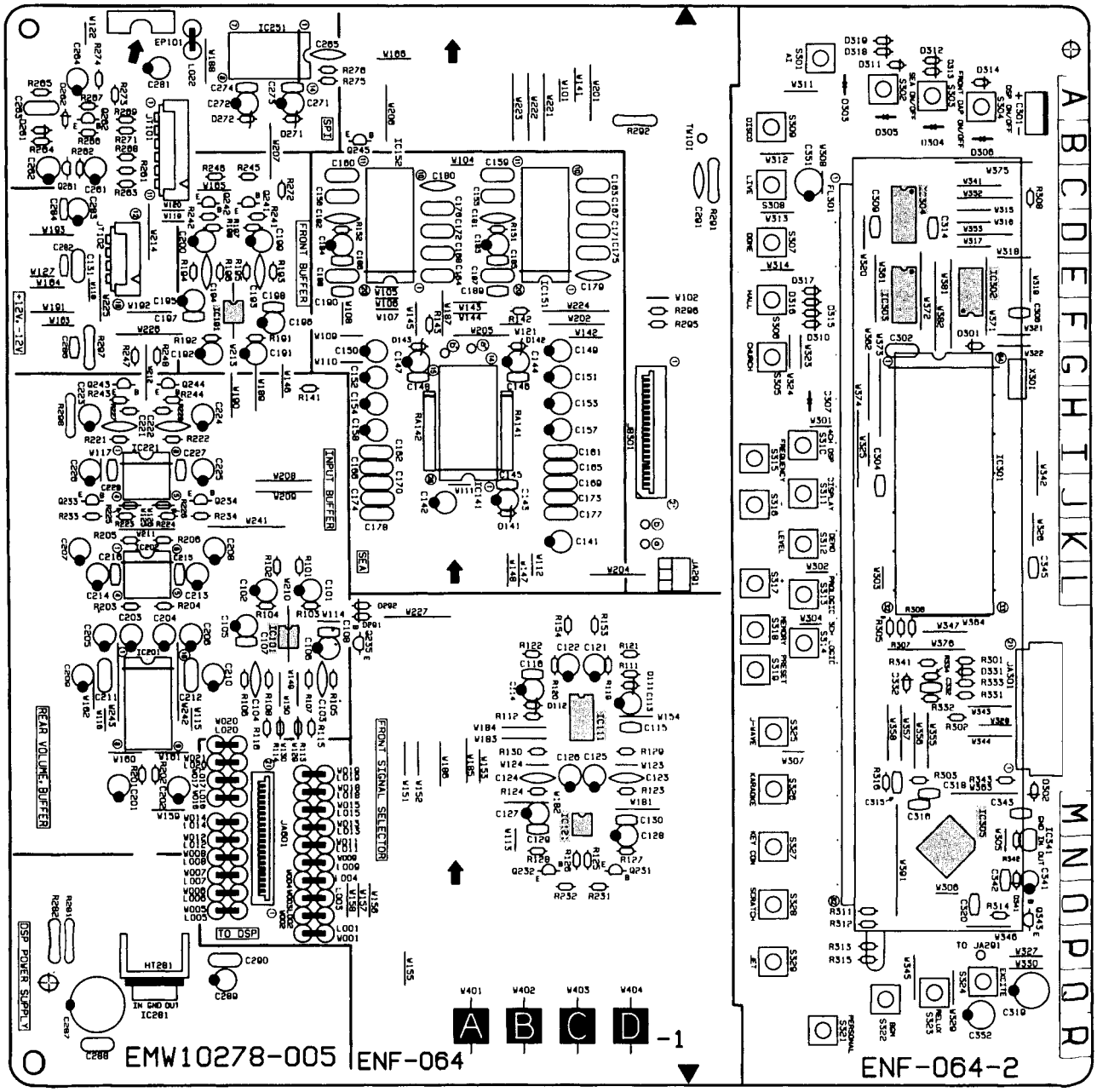
No mark indicates all areas.

Printed Circuit Board Ass'y and Parts List

■ENF-064☐ Front & Main PC Board Ass'y

Note : ENF-064☐ varies according to the areas employed. See note (1) when placing an order.

※ The shaded parts are installed on the foil side of P.C.B (ENF-064).



Note (1)

PC Board Ass'y	Version	Designated Areas
ENF-064 [B]	A	Australia
	BS	the U.K.
	EN	Scandinavia
	EF	Continental Europe
	US	Singapore
	UT	Taiwan
	U	Universal Type
ENF-064 [C]	G	Germany
	GI	Italy

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q231	2SD2144S(VW)	SILICON	ROHM	
	Q232	2SD2144S(VW)	SILICON	ROHM	
	Q233	2SD2144S(VW)	SILICON	ROHM	
	Q234	2SD2144S(VW)	SILICON	ROHM	
	Q235	DTA144ES	SILICON	ROHM	
	Q241	2SD2144S(VW)	SILICON	ROHM	
	Q242	2SD2144S(VW)	SILICON	ROHM	
	Q243	2SD2144S(VW)	SILICON	ROHM	
	Q244	2SD2144S(VW)	SILICON	ROHM	
	Q245	DTA144ES	SILICON	ROHM	
	Q261	2SD2144S(VW)	SILICON	ROHM	
	Q262	2SD2144S(VW)	SILICON	ROHM	
	Q343	DTC114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC141	LC7522	I.C.	SANYO	
	IC151	LA3607S	I.C.	SANYO	
	IC152	LA3607S	I.C.	SANYO	
	IC201	TC9213P	I.C.	TOSHIBA	
	IC202	XRA15218	I.C.	ROHM	
	IC221	XRA15218	I.C.	ROHM	
	IC251	XR1097CP	I.C.	EXAR JAPAN	
	IC281	NJM78M05FD	I.C.	DAINICHI	
	IC301	MN171602JHK	I.C.	MATSUSHITA	
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	A
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	BS
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	EF
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	EN
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	G
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	GI
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	U
	IC301	MN17P1602SDPJHK	I.C.	MATSUSHITA	UT
	IC341	MN1281(P,Q)	I.C.	MATSUSHITA	

⚠ : SAFETY PARTS

I.C.s

✻ The following parts are shaded I.C.s.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC101	XRA15218F	I.C.		
	IC111	TC4053BF	I.C.	TOSHIBA	
	IC121	XRA15218F	I.C.		
	IC191	XRA15218F	I.C.		
	IC302	TC74HC42AFT2	I.C.	TOSHIBA	
	IC303	AN6873SW	I.C.	MATSUSHITA	
	IC304	AN6873SW	I.C.	MATSUSHITA	
	IC305	MSC7112-01GSV1K	I.C.	NIHON DENSO	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D111	MTZ5.1JC	ZENER	ROHM	
	D112	MTZ5.1JC	ZENER	ROHM	
	D141	MTZ6.8JC	ZENER	ROHM	
	D142	MTZ6.8JC	ZENER	ROHM	
	D143	MTZ5.1JC	ZENER	ROHM	
	D261	1SS119	SILICON	HITACHI	
	D262	1SS119	SILICON	HITACHI	
	D271	MTZ5.1JC	ZENER	ROHM	
	D272	MTZ5.1JC	ZENER	ROHM	
	D291	1SS119	SILICON	HITACHI	
	D292	1SS119	SILICON	HITACHI	
	D301	1SS119	SILICON	HITACHI	
	D302	1SS119	SILICON	HITACHI	
	D303	SLR-342VC3F	L.E.D.	ROHM	
	D304	SLR-342VC3F	L.E.D.	ROHM	
	D305	SLR-342VC3F	L.E.D.	ROHM	
	D306	SLR-342VC3F	L.E.D.	ROHM	
	D307	SLR-342VC3F	L.E.D.	ROHM	
	D310	1SS119	SILICON	HITACHI	
	D311	1SS119	SILICON	HITACHI	
	D312	1SS119	SILICON	HITACHI	
	D313	1SS119	SILICON	HITACHI	
	D314	1SS119	SILICON	HITACHI	
	D315	1SS119	SILICON	HITACHI	
	D316	1SS119	SILICON	HITACHI	
	D317	1SS119	SILICON	HITACHI	
	D318	1SS119	SILICON	HITACHI	
	D319	1SS119	SILICON	HITACHI	
	D331	1SS119	SILICON	HITACHI	
	D332	1SS119	SILICON	HITACHI	
	D341	1SS119	SILICON	HITACHI	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QET41EM-106	10MF	25V	ELECTRO	
	C102	QET41EM-106	10MF	25V	ELECTRO	
	C103	QCS11HJ-470	47PF	50V	CERAMIC	
	C104	QCS11HJ-470	47PF	50V	CERAMIC	
	C105	QET41EM-476	47MF	25V	ELECTRO	
	C106	QET41EM-476	47MF	25V	ELECTRO	
	C107	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C108	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C113	QET41AM-107	100MF	10V	ELECTRO	
	C114	QET41AM-107	100MF	10V	ELECTRO	
	C115	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C116	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C121	QET41HM-105	1MF	50V	ELECTRO	
	C122	QET41HM-105	1MF	50V	ELECTRO	
	C123	QCS11HJ-470	47PF	50V	CERAMIC	
	C124	QCS11HJ-470	47PF	50V	CERAMIC	
	C125	QET41HM-475	4.7MF	50V	ELECTRO	
	C126	QET41HM-475	4.7MF	50V	ELECTRO	
	C127	QET41CM-476	47MF	16V	ELECTRO	
	C128	QET41CM-476	47MF	16V	ELECTRO	
	C129	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C130	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C131	QCZ0202-155	1.5MF	25V	CERAMIC	
	C141	QET41HM-475	4.7MF	50V	ELECTRO	
	C142	QET41HM-475	4.7MF	50V	ELECTRO	
	C143	QET41AM-107	100MF	10V	ELECTRO	
	C144	QET41AM-107	100MF	10V	ELECTRO	
	C145	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C146	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C147	QET41AM-107	100MF	10V	ELECTRO	
	C148	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C149	QET41HM-475	4.7MF	50V	ELECTRO	
	C150	QET41HM-475	4.7MF	50V	ELECTRO	
	C151	QET41HM-474	0.47MF	50V	ELECTRO	
	C152	QET41HM-474	0.47MF	50V	ELECTRO	
	C153	QETB1HM-224	0.22MF	50V	ELECTRO	
	C154	QETB1HM-224	0.22MF	50V	ELECTRO	
	C155	QFV81HJ-124	0.12MF	50V	T.FILM	
	C156	QFV81HJ-124	0.12MF	50V	T.FILM	
	C157	QETB1HM-224	0.22MF	50V	ELECTRO	
	C158	QETB1HM-224	0.22MF	50V	ELECTRO	
	C159	QFV81HJ-473	0.047MF	50V	T.FILM	
	C160	QFV81HJ-473	0.047MF	50V	T.FILM	
	C161	QFV81HJ-104	0.1MF	50V	T.FILM	
	C162	QFV81HJ-104	0.1MF	50V	T.FILM	
	C163	QFN81HJ-183	0.018MF	50V	MYLAR	
	C164	QFN81HJ-183	0.018MF	50V	MYLAR	
	C165	QFV81HJ-393	0.039MF	50V	T.FILM	
	C166	QFV81HJ-393	0.039MF	50V	T.FILM	
	C167	QFN81HJ-682	6800PF	50V	MYLAR	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C168	QFN81HJ-682	6800PF	50V	MYLAR	
	C169	QFN81HJ-153	0.015MF	50V	MYLAR	
	C170	QFN81HJ-153	0.015MF	50V	MYLAR	
	C171	QFN81HJ-272	2700PF	50V	MYLAR	
	C172	QFN81HJ-272	2700PF	50V	MYLAR	
	C173	QFN81HJ-562	5600PF	50V	MYLAR	
	C174	QFN81HJ-562	5600PF	50V	MYLAR	
	C175	QFN81HJ-102	1000PF	50V	MYLAR	
	C176	QFN81HJ-102	1000PF	50V	MYLAR	
	C177	QFN81HJ-222	2200PF	50V	MYLAR	
	C178	QFN81HJ-222	2200PF	50V	MYLAR	
	C179	QCS11HJ-471	470PF	50V	CERAMIC	
	C180	QCS11HJ-471	470PF	50V	CERAMIC	
	C181	QCS11HJ-101	100PF	50V	CERAMIC	
	C182	QCS11HJ-101	100PF	50V	CERAMIC	
	C183	QET41AM-107	100MF	10V	ELECTRO	
	C184	QET41AM-107	100MF	10V	ELECTRO	
	C185	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C186	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C187	QFN81HJ-104	0.1MF	50V	MYLAR	
	C188	QFN81HJ-104	0.1MF	50V	MYLAR	
	C189	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C190	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C191	QET41HM-475	4.7MF	50V	ELECTRO	
	C192	QET41HM-475	4.7MF	50V	ELECTRO	
	C193	QCS11HJ-470	47PF	50V	CERAMIC	
	C194	QCS11HJ-470	47PF	50V	CERAMIC	
	C195	QET41CM-476	47MF	16V	ELECTRO	
	C196	QET41CM-476	47MF	16V	ELECTRO	
	C197	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C198	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C199	QET41HM-475	4.7MF	50V	ELECTRO	
	C200	QET41HM-475	4.7MF	50V	ELECTRO	
	C201	QETB1HM-225	2.2MF	50V	ELECTRO	
	C202	QETB1HM-225	2.2MF	50V	ELECTRO	
	C203	QETB1HM-225	2.2MF	50V	ELECTRO	
	C204	QETB1HM-225	2.2MF	50V	ELECTRO	
	C205	QET41HM-475	4.7MF	50V	ELECTRO	
	C206	QET41HM-475	4.7MF	50V	ELECTRO	
	C207	QET41HM-475	4.7MF	50V	ELECTRO	
	C208	QET41HM-475	4.7MF	50V	ELECTRO	
	C210	QET41CM-107	100MF	16V	ELECTRO	
	C211	QFV81HJ-104	0.1MF	50V	T.FILM	
	C212	QFV81HJ-104	0.1MF	50V	T.FILM	
	C213	QET41CM-476	47MF	16V	ELECTRO	
	C214	QET41CM-476	47MF	16V	ELECTRO	
	C215	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C216	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C221	QCS11HJ-470	47PF	50V	CERAMIC	
	C222	QCS11HJ-470	47PF	50V	CERAMIC	
	C223	QET41HM-475	4.7MF	50V	ELECTRO	
	C224	QET41HM-475	4.7MF	50V	ELECTRO	
	C225	QET41CM-476	47MF	16V	ELECTRO	
	C227	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C228	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C261	QET41EM-106	10MF	25V	ELECTRO	
	C262	QET41HM-105	1MF	50V	ELECTRO	
	C263	QFN41HJ-473	0.047MF	50V	MYLAR	
	C264	QET41CM-476	47MF	16V	ELECTRO	
	C265	QFN81HJ-102	1000PF	50V	MYLAR	
	C271	QETBOJM-227	220MF	6.3V	ELECTRO	
	C272	QETBOJM-227	220MF	6.3V	ELECTRO	
	C273	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C274	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C281	QET41AM-227	220MF	10V	ELECTRO	
	C282	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C284	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C286	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C287	QETB1CM-228M	2200MF	16V	ELECTRO	
	C288	QFV81HJ-104	0.1MF	50V	T.FILM	
	C289	QET41AM-227	220MF	10V	ELECTRO	
	C290	QFV81HJ-104	0.1MF	50V	T.FILM	
	C291	QCS21HJ-391	390PF	50V	CERAMIC	
	C301	QEADOHZ-479A	47000MF		ELECTRO	
	C302	QCZ0202-155	1.5MF	25V	CERAMIC	
	C304	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C306	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C309	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C314	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C315	QCBB1HK-101	100PF	50V	CERAMIC	
	C316	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C318	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C319	QER51VM-476	47MF	35V	ELECTRO	
	C320	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C332	QCBB1HK-471	470PF	50V	CERAMIC	
	C341	QER51HM-474G	0.47MF	50V	ELECTRO	
	C342	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C343	QCBB1HK-101	100PF	50V	CERAMIC	
	C345	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C351	QEK51HM-226	22MF	50V	ELECTRO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C352	QEK51HM-226	22MF	50V	ELECTRO	
	C361	QCBB1HK-221	220PF	50V	CERAMIC	A
	C361	QCBB1HK-221	220PF	50V	CERAMIC	BS
	C361	QCBB1HK-221	220PF	50V	CERAMIC	EF
	C361	QCBB1HK-221	220PF	50V	CERAMIC	EN
	C361	QCBB1HK-221	220PF	50V	CERAMIC	U
	C361	QCBB1HK-221	220PF	50V	CERAMIC	US
	C361	QCBB1HK-221	220PF	50V	CERAMIC	UT

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R101	QRD167J-221	220	1/6W	CARBON	
	R102	QRD167J-221	220	1/6W	CARBON	
	R103	QRD167J-473	47K	1/6W	CARBON	
	R104	QRD167J-473	47K	1/6W	CARBON	
	R105	QRD167J-102	1K	1/6W	CARBON	
	R106	QRD167J-102	1K	1/6W	CARBON	
	R107	QRD167J-104	100K	1/6W	CARBON	
	R108	QRD167J-104	100K	1/6W	CARBON	
	R111	QRD167J-102	1K	1/6W	CARBON	
	R112	QRD167J-102	1K	1/6W	CARBON	
	R121	QRD167J-473	47K	1/6W	CARBON	
	R122	QRD167J-473	47K	1/6W	CARBON	
	R123	QRD167J-102	1K	1/6W	CARBON	
	R124	QRD167J-102	1K	1/6W	CARBON	
	R125	QRD167J-242	2.4K	1/6W	CARBON	
	R126	QRD167J-242	2.4K	1/6W	CARBON	
	R127	QRD167J-104	100K	1/6W	CARBON	
	R128	QRD167J-104	100K	1/6W	CARBON	
	R129	QRD167J-473	47K	1/6W	CARBON	
	R130	QRD167J-473	47K	1/6W	CARBON	
⚠	R141	QRV144F-2200A		1/4W	M.FILM	
	R142	QRD167J-301	300	1/6W	CARBON	
	R143	QRD167J-131	130	1/6W	CARBON	
	R151	QRD167J-912	9.1K	1/6W	CARBON	
	R152	QRD167J-912	9.1K	1/6W	CARBON	
	R153	QRD167J-912	9.1K	1/6W	CARBON	
	R154	QRD167J-912	9.1K	1/6W	CARBON	
	R191	QRD167J-473	47K	1/6W	CARBON	
	R192	QRD167J-473	47K	1/6W	CARBON	
	R193	QRD167J-103	10K	1/6W	CARBON	
	R194	QRD167J-103	10K	1/6W	CARBON	
	R195	QRD167J-393	39K	1/6W	CARBON	
	R196	QRD167J-393	39K	1/6W	CARBON	
	R197	QRD167J-473	47K	1/6W	CARBON	
	R198	QRD167J-473	47K	1/6W	CARBON	
	R201	QRD167J-224	220K	1/6W	CARBON	
	R202	QRD167J-224	220K	1/6W	CARBON	
	R203	QRD167J-124	120K	1/6W	CARBON	
	R204	QRD167J-124	120K	1/6W	CARBON	
	R205	QRD167J-124	120K	1/6W	CARBON	
	R206	QRD167J-124	120K	1/6W	CARBON	
	R221	QRD167J-912	9.1K	1/6W	CARBON	
	R222	QRD167J-912	9.1K	1/6W	CARBON	
	R223	QRD167J-182	1.8K	1/6W	CARBON	
	R224	QRD167J-182	1.8K	1/6W	CARBON	
	R225	QRD167J-332	3.3K	1/6W	CARBON	
	R226	QRD167J-332	3.3K	1/6W	CARBON	
	R227	QRD167J-473	47K	1/6W	CARBON	
	R228	QRD167J-473	47K	1/6W	CARBON	
	R231	QRD167J-103	10K	1/6W	CARBON	
	R232	QRD167J-103	10K	1/6W	CARBON	
	R233	QRD167J-103	10K	1/6W	CARBON	
	R234	QRD167J-103	10K	1/6W	CARBON	
	R241	QRD167J-221	220	1/6W	CARBON	
	R242	QRD167J-221	220	1/6W	CARBON	
	R243	QRD167J-221	220	1/6W	CARBON	
	R244	QRD167J-221	220	1/6W	CARBON	
	R245	QRD167J-103	10K	1/6W	CARBON	
	R246	QRD167J-103	10K	1/6W	CARBON	
	R247	QRD167J-103	10K	1/6W	CARBON	
	R248	QRD167J-103	10K	1/6W	CARBON	
	R261	QRD167J-513	51K	1/6W	CARBON	
	R262	QRD167J-204	200K	1/6W	CARBON	
	R263	QRD167J-222	2.2K	1/6W	CARBON	
	R264	QRD167J-102	1K	1/6W	CARBON	
	R265	QRD167J-104	100K	1/6W	CARBON	
	R266	QRD167J-103	10K	1/6W	CARBON	
	R267	QRD167J-473	47K	1/6W	CARBON	
	R268	QRD167J-393	39K	1/6W	CARBON	
	R269	QRD167J-562	5.6K	1/6W	CARBON	
	R271	QRD167J-391	390	1/6W	CARBON	
	R272	QRD167J-391	390	1/6W	CARBON	
	R273	QRD167J-223	22K	1/6W	CARBON	
	R274	QRD167J-223	22K	1/6W	CARBON	
	R275	QRD167J-152	1.5K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R276	QRD167J-563	56K 1/6W CARBON	
	R281	QRD148J-3R3	3.3 1/4W CARBON	
	R282	QRD148J-3R3	3.3 1/4W CARBON	
	R291	QRD148J-3R3	3.3 1/4W CARBON	
	R292	QRD148J-3R3	3.3 1/4W CARBON	
	R295	QRD167J-102	1K 1/6W CARBON	
	R296	QRD167J-221	220 1/6W CARBON	
	R297	QRD148J-220	22 1/4W CARBON	
	R298	QRD148J-220	22 1/4W CARBON	
	R301	QRD167J-103	10K 1/6W CARBON	
	R302	QRD167J-103	10K 1/6W CARBON	
	R303	QRD167J-473	47K 1/6W CARBON	
	R305	QRD167J-103	10K 1/6W CARBON	
	R306	QRD167J-103	10K 1/6W CARBON	
	R307	QRD167J-103	10K 1/6W CARBON	
	R308	QRD167J-470	47 1/6W CARBON	
	R311	QRD167J-431	430 1/6W CARBON	
	R312	QRD167J-391	390 1/6W CARBON	
	R313	QRD167J-431	430 1/6W CARBON	
	R314	QRD167J-511	510 1/6W CARBON	
	R315	QRD167J-331	330 1/6W CARBON	
	R316	QRD167J-331	330 1/6W CARBON	
	R331	QRD167J-221	220 1/6W CARBON	
	R332	QRD167J-221	220 1/6W CARBON	
	R333	QRD167J-473	47K 1/6W CARBON	
	R334	QRD167J-473	47K 1/6W CARBON	
	R341	QRD167J-102	1K 1/6W CARBON	
	R342	QRD167J-103	10K 1/6W CARBON	
	R343	QRD167J-223	22K 1/6W CARBON	
	RA141	QRB099J-474	470K 1/10W R.NETWORK	
	RA142	QRB099J-474	470K 1/10W R.NETWORK	
	RA301	QRB169J-104	100K 1/10W R.NETWORK	A
	RA301	QRB169J-104	100K 1/10W R.NETWORK	BS
	RA301	QRB169J-104	100K 1/10W R.NETWORK	EF
	RA301	QRB169J-104	100K 1/10W R.NETWORK	EN
	RA301	QRB169J-104	100K 1/10W R.NETWORK	G
	RA301	QRB169J-104	100K 1/10W R.NETWORK	GI
	RA301	QRB169J-104	100K 1/10W R.NETWORK	U
	RA301	QRB169J-104	100K 1/10W R.NETWORK	UT
	RA302	QRB119J-104	100K 1/10W R.NETWORK	A
	RA302	QRB119J-104	100K 1/10W R.NETWORK	BS
	RA302	QRB119J-104	100K 1/10W R.NETWORK	EF
	RA302	QRB119J-104	100K 1/10W R.NETWORK	EN
	RA302	QRB119J-104	100K 1/10W R.NETWORK	G
	RA302	QRB119J-104	100K 1/10W R.NETWORK	GI
	RA302	QRB119J-104	100K 1/10W R.NETWORK	U
	RA302	QRB119J-104	100K 1/10W R.NETWORK	UT

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E308193-001	FL HOLDER	
		E3400-431	SPACER	
		E75933-001	SPACER	
		SBSB3008Z	SCREW	
	L012	ENZ8101-007	INDUCTOR	
	L015	ENZ8101-007	INDUCTOR	
	L022	ENZ8101-007	INDUCTOR	
	S301	ESP0001-023M	TACT SWITCH(CSRP)	
	S302	ESP0001-023M	TACT SWITCH(SEA ON/OFF)	
	S303	ESP0001-023M	TACT SWITCH(FRONT DAP ON/OFF)	
	S304	ESP0001-023M	TACT SWITCH(DSP ON/OFF)	
	S305	ESP0001-023M	TACT SWITCH(CHURCH)	
	S306	ESP0001-023M	TACT SWITCH(HALL)	
	S307	ESP0001-023M	TACT SWITCH(DOME)	
	S308	ESP0001-023M	TACT SWITCH(LIVE)	
	S309	ESP0001-023M	TACT SWITCH(D.CLUB)	
	S310	ESP0001-023M	TACT SWITCH(4CH DSP)	
	S311	ESP0001-023M	TACT SWITCH(DISPLAY)	
	S312	ESP0001-023M	TACT SWITCH(DEMO)	
	S313	ESP0001-023M	TACT SWITCH(PROLOGIC)	
	S314	ESP0001-023M	TACT SWITCH(3CH LOGIC)	
	S315	ESP0001-023M	TACT SWITCH(FREQUENCY)	
	S316	ESP0001-023M	TACT SWITCH(LEVEL −)	
	S317	ESP0001-023M	TACT SWITCH(LEVEL +)	
	S318	ESP0001-023M	TACT SWITCH(MEMORY)	
	S319	ESP0001-023M	TACT SWITCH(PRESET)	
	S321	ESP0001-023M	TACT SWITCH(DSEP)	
	S322	ESP0001-023M	TACT SWITCH(SOOTHING)	
	S323	ESP0001-023M	TACT SWITCH(RELUX)	
	S324	ESP0001-023M	TACT SWITCH(EXCITE)	
	S325	ESP0001-023M	TACT SWITCH(SQUEEZE)	
	S326	ESP0001-023M	TACT SWITCH(VOC MASK)	
	S327	ESP0001-023M	TACT SWITCH(KEY CTRL)	
	S328	ESP0001-023M	TACT SWITCH(SCRATCH)	
	S329	ESP0001-023M	TACT SWITCH(FLANGER)	

⚠ : SAFETY PARTS

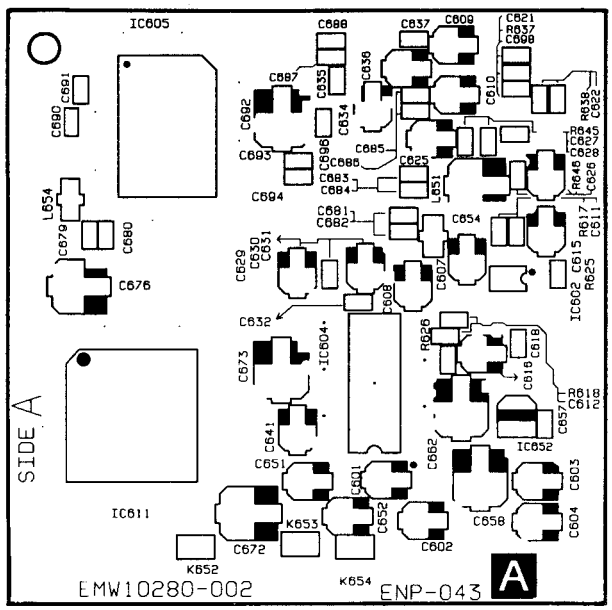
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	X301	ECX0060-000EM	RESONATOR	
	EP101	E70859-001	EARTH PLATE	
	FL301	ELU0001-141	FL TUBE	
	HT281	E70306-001	HEAT SINK	
	JA291	EMV7122-103	CONNECTOR(3PIN)	
	JA301	EMV7123-021R	CONNECTOR(21PIN)	
	JA601	EMV7123-021	CONNECTOR(21PIN)	
	JB301	EMV7123-021	CONNECTOR(21PIN)	
	JT101	EMV7141-011	CONNECTOR(11PIN)	
	JT102	EMV7141-008M	CONNECTOR(8PIN)	
	TW101	EWT011-158	TERMINAL WIRE	

⚠ : SAFETY PARTS

■ENP-043 A Digital Signal Processor PC Board Ass'y

- **Surface**



I.C.s

⚠	ITEM	PARTS NUMBER	DESCRIPTION		AREA
	IC602	XRA15218FT2	I.C.	ROHM	
	IC604	CS5339-KS	I.C.	ASAHI	
	IC605	LC83016E	I.C.	SANYO	
	IC611	MN170801JPU	I.C.	MATUSHITA	
	IC652	NJM78L05UA	I.C.	DAIHITI	

⚠ SAFETY PARTS

Capacitors

⚠	ITEM	PARTS NUMBER	DESCRIPTION			AREA
	C601	NEH11CM-106RZ	10MF	10V	CERAMIC	
	C602	NEH11CM-106RZ	10MF	10V	CERAMIC	
	C603	NEH11EM-475RZ	4.7MF	25V	CERAMIC	
	C604	NEH11EM-475RZ	4.7MF	25V	CERAMIC	
	C607	NEH11EM-475RZ	4.7MF	25V	CERAMIC	
	C608	NEH11EM-475RZ	4.7MF	25V	CERAMIC	
	C609	NEH11EM-475RZ	4.7MF	25V	CERAMIC	
	C610	NEH11EM-475RZ	4.7MF	25V	CERAMIC	
	C611	NCB21HK-103AY	0.01MF	50V	CERAMIC	
	C612	NCB21HK-103AY	0.01MF	50V	CERAMIC	
	C615	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C616	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C618	NCB21HK-223AY	0.022MF	50V	CERAMIC	
	C621	NCB21HK-103AY	0.01MF	50V	CERAMIC	
	C622	NCB21HK-103AY	0.01MF	50V	CERAMIC	
	C625	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C626	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C627	NCB21HK-223AY	0.022MF	50V	CERAMIC	
	C628	NCB21HK-223AY	0.022MF	50V	CERAMIC	
	C629	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C630	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C631	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C632	NCS21HJ-101AY	100PF	50V	CERAMIC	
	C634	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C635	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C636	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C637	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C641	NEH11CM-106RZ	10MF	16V	CERAMIC	
	C651	NEH11HM-474RZ	0.47MF	50V	CERAMIC	
	C652	NEH11HM-474RZ	0.47MF	50V	CERAMIC	
	C654	NEH10JM-107RZ	100MF	6.3V	CERAMIC	
	C657	NCB21HK-223AY	0.022MF	50V	CERAMIC	
	C658	NEH10JM-107RZ	100MF	6.3V	CERAMIC	
	C662	NEH10JM-107RZ	100MF	6.3V	CERAMIC	
	C672	NEH10JM-107RZ	100MF	6.3V	CERAMIC	

⚠ SAFETY PARTS

Capacitors

⚠	ITEM	PARTS NUMBER	DESCRIPTION			AREA
	C673	NEH10JM-107RZ	100MF	6.3V	CERAMIC	
	C676	NEH10JM-107RZ	100MF	6.3V	CERAMIC	
	C679	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C680	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C681	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C682	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C683	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C684	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C685	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C686	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C687	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C688	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C690	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C691	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C692	NEH10JM-107RZ	100MF	6.3V	CERAMIC	
	C693	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C694	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C696	NCS21HJ-101AY	100MF	50V	CERAMIC	
	C698	NCF21CZ-105AY	1MF	16V	CERAMIC	

⚠ SAFETY PARTS

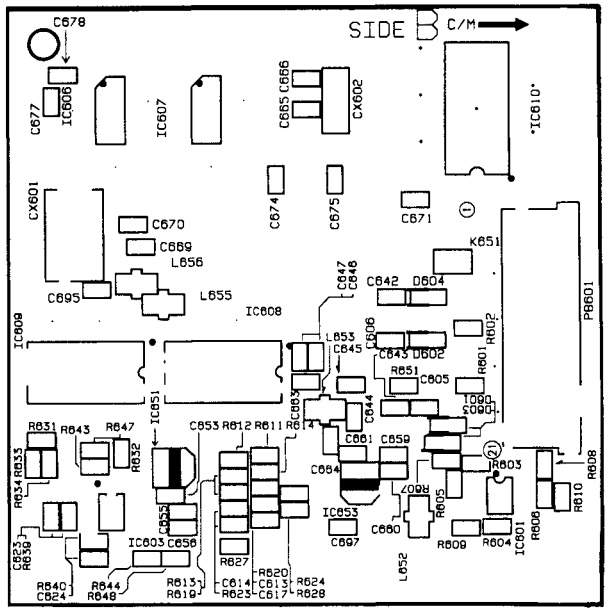
Resistors

⚠	ITEM	PARTS NUMBER	DESCRIPTION	AREA
	R617	NRSA02F-821NY	METAL GLAZE	
	R618	NRSA02F-821NY	METAL GLAZE	
	R625	NRSA02F-271NY	METAL GLAZE	
	R626	NRSA02F-271NY	METAL GLAZE	
	R637	NRSA02F-821NY	METAL GLAZE	
	R638	NRSA02F-821NY	METAL GLAZE	
	R645	NRSA02F-271NY	METAL GLAZE	
	R646	NRSA02F-271NY	METAL GLAZE	

Others

⚠	ITEM	PARTS NUMBER	DESCRIPTION	AREA
	K652	ENZ8101-013T	FERRITE BEADS	
	K653	ENZ8101-N01AY	FERRITE BEADS	
	K654	ENZ8101-N01AY	FERRITE BEADS	
	L651	EQF0703-N222NZ	EMI FILTER	
	L654	EQF0703-N222NZ	EMI FILTER	

• Foil



I.C.s

⚠	ITEM	PARTS NUMBER	DESCRIPTION		AREA
	IC601	XRA15218FT2	I.C.	ROHM	
	IC603	XRA15218FT2	I.C.	ROHM	
	IC606	MN41464AJ-08W	I.C.	MATUSHTA	
	IC607	MN41464AJ-08W	I.C.	MATUSHTA	
	IC608	LC78835MX	I.C.	SANYO	
	IC609	LC78835MX	I.C.	SANYO	
	IC610	LH5359MFT1	I.C.	SHAP	
	IC633	NJM79L05UA	I.C.	DAINITI	

⚠ SAFETY PARTS

Diodes

⚠	ITEM	PARTS NUMBER	DESCRIPTION		AREA
	D601	DTZ4.7(C)-X	ZENER	ROHM	
	D602	DTZ4.7(C)-X	ZENER	ROHM	
	D603	DTZ4.7(C)-X	ZENER	ROHM	
	D604	DTZ4.7(C)-X	ZENER	ROHM	

⚠ SAFETY PARTS

Capacitors

⚠	ITEM	PARTS NUMBER	DESCRIPTION			AREA
	C605	NCB21HK-103AY	0.01MF	50V	CERAMIC	
	C606	NCB21HK-103AY	0.01MF	50V	CERAMIC	
	C613	NCS21HJ-222AY	2200PF	50V	CERAMIC	
	C614	NCS21HJ-222AY	2200PF	50V	CERAMIC	
	C617	NCB21HK-223AY	0.022MF	50V	CERAMIC	
	C623	NCS21HJ-222AY	2200PF	50V	CERAMIC	
	C624	NCS21HJ-222AY	2200PF	50V	CERAMIC	
	C642	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C643	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C644	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C645	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C646	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C647	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C653	NCB21HK-223AY	0.022MF	50V	CERAMIC	
	C655	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C656	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C659	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C660	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C661	NCB21HK-223AY	0.022MF	50V	CERAMIC	
	C663	NCB21HK-102AY	1000PF	50V	CERAMIC	

⚠ SAFETY PARTS

Capacitors

⚠	ITEM	PARTS NUMBER	DESCRIPTION			AREA
	C664	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C665	NCS21HJ-300AY	30PF	50V	CERAMIC	
	C666	NCS21HJ-300AY	30PF	50V	CERAMIC	
	C669	NCS21HJ-9R0AY	9PF	50V	CERAMIC	
	C670	NCS21HJ-9R0AY	9PF	50V	CERAMIC	
	C671	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C674	NCF21HZ-104AY	0.1MF	50V	CERAMIC	
	C675	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C677	NCB21HK-102AY	1000PF	50V	CERAMIC	
	C678	NCF21CZ-105AY	1MF	16V	CERAMIC	
	C695	NCS21HJ-101AY	100PF	50V	CERAMIC	
	C697	NCF21CZ-105AY	1MF	16V	CERAMIC	

⚠ SAFETY PARTS

Resistors

⚠	ITEM	PARTS NUMBER	DESCRIPTION	AREA
	R601	NRSA02F-271NY	METAL GLAZE	
	R602	NRSA02F-271NY	METAL GLAZE	
	R603	NRSA02F-473NY	METAL GLAZE	
	R604	NRSA02F-473NY	METAL GLAZE	
	R605	NRSA02F-683NY	METAL GLAZE	
	R606	NRSA02F-683NY	METAL GLAZE	
	R607	NRSA02F-221MY	METAL GLAZE	
	R608	NRSA02F-221MY	METAL GLAZE	
	R609	NRSA02F-473NY	METAL GLAZE	
	R610	NRSA02F-473NY	METAL GLAZE	
	R611	NRSA02F-122NY	METAL GLAZE	
	R612	NRSA02F-122NY	METAL GLAZE	
	R613	NRSA02F-473NY	METAL GLAZE	
	R614	NRSA02F-473NY	METAL GLAZE	
	R619	NRSA02F-821NY	METAL GLAZE	
	R620	NRSA02F-821NY	METAL GLAZE	
	R623	NRSA02F-273NY	METAL GLAZE	
	R624	NRSA02F-273NY	METAL GLAZE	
	R627	NRSA02F-271NY	METAL GLAZE	
	R628	NRSA02F-271NY	METAL GLAZE	
	R631	NRSA02F-122NY	METAL GLAZE	
	R632	NRSA02F-122NY	METAL GLAZE	
	R633	NRSA02F-473NY	METAL GLAZE	
	R634	NRSA02F-473NY	METAL GLAZE	
	R639	NRSA02F-821NY	METAL GLAZE	
	R640	NRSA02F-821NY	METAL GLAZE	
	R643	NRSA02F-273NY	METAL GLAZE	
	R644	NRSA02F-273NY	METAL GLAZE	
	R647	NRSA02F-271NY	METAL GLAZE	
	R648	NRSA02F-271NY	METAL GLAZE	
	R651	NRSA02F-100NY	METAL GLAZE	

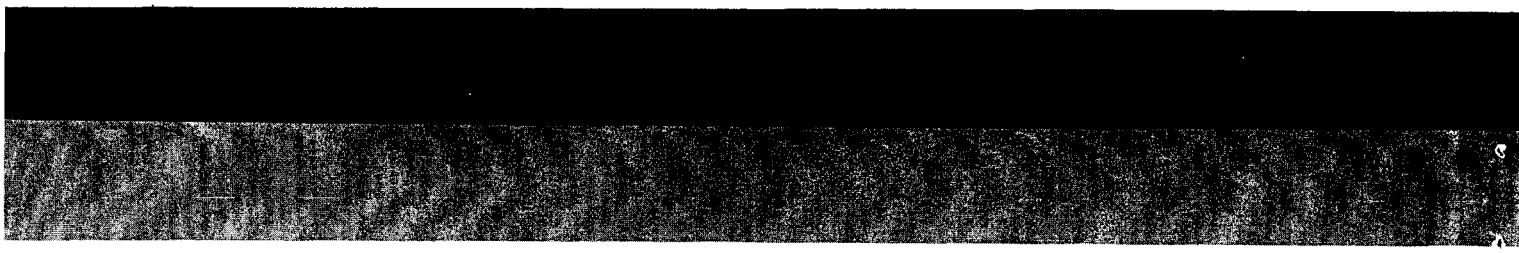
⚠SAFETY PARTS

Others

⚠	ITEM	PARTS NUMBER	DESCRIPTION	AREA
	K651	ENZ8101-0137	FERRITE BEADS	
	L652	EQF0703-N222NZ	EMI FILTER	
	L653	EQF0703-N222NZ	EMI FILTER	
	L655	EQF0703-N222NZ	EMI FILTER	
	L656	EQF0703-N222NZ	EMI FILTER	
	CX601	ECX0024-576KA1T	RESONATOR	
	CX602	ECX0006-000KS1T	RESONATOR	
	PB601	EMV7147-021E	CONNECTOR(21PIN) TO DSP:MAIN	

⚠SAFETY PARTS

SE-MXG9BK



JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO PRODUCTS DIVISION, 1644, Shimotsuruma, Yamato-shi, Kanagawa-ken, 242, JAPAN

(No.20435) Printed by: Schaltungsdienst Lange, Berlin (GERMANY) 9306 (S)

V01098

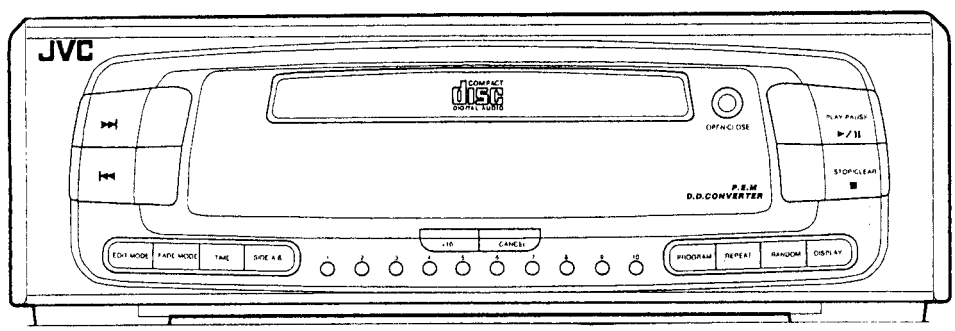
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

CA-MXG9BK

(Unit No. XL-MXG9BK)



Note

1. This manual is for one part of the titled model consisting of the plural units as detailed.

Unit No Consisted	*Part of Model*	*Manual No.*
XL-MXG9BK	*COMPACT DISC PLAYER*	*20436*
RX-MXG9BK	*TUNER-AMPLIFIER*	*20434*
SE-MXG9BK	*S.E.A-GRAPHIC EQUALIZER*	*20435*
TD-MXG9BK	*CASSETTE DECK*	*20437*

2. For instruction manual,packing matherials and accessories,please refer to the RX-MXG9BK (S.M.No.20434.)

3. RX-MXG9BK is needed(for power supply etc.)when servicing.

Contents

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No. 20436
Jun. 1993

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
7. CAUTION : The compact disc player provides a laser diode of wavelength 780-790nm and optical output power typical 3mW at the laser diode.

VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

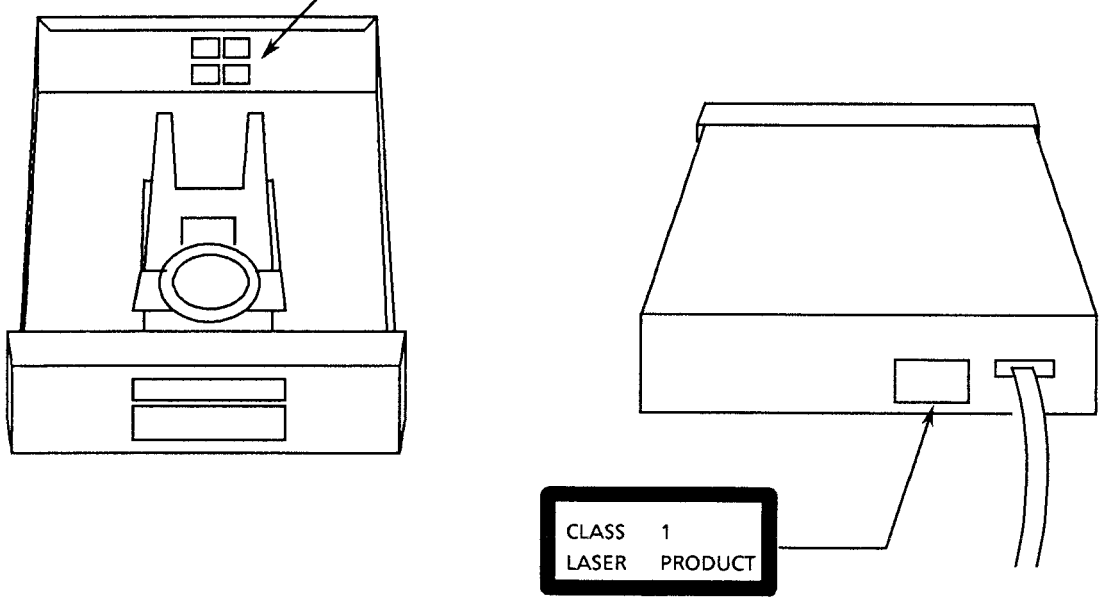
(Except for the U. S. A.)

DANGER: invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

VARNING: Osynling laserstråling när denna del å öppnad och spärren är urkoppled. Betrakta ej stålen. (s)

ADVARSEL: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude at funktion. Undgåudsættelse for stråling. (d)

VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)



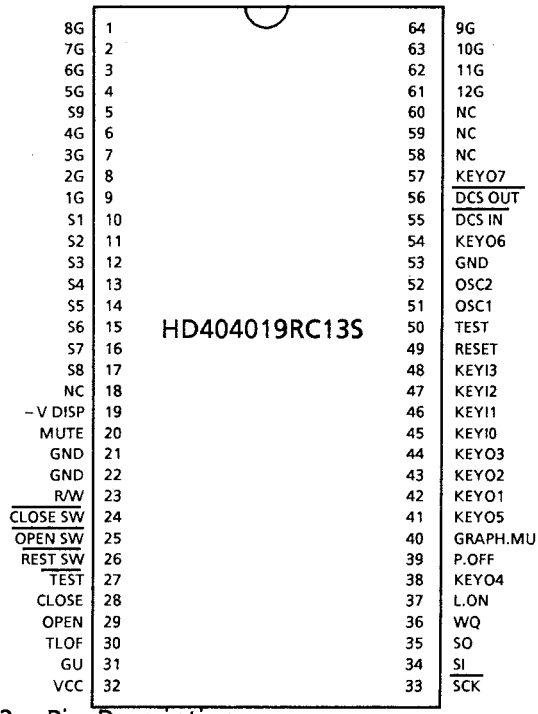
CLASSIFICATION LABEL

(Except for the U. S. A. and Canada)

Description of Major LSIs

■ HD404019RC13S (IC991) : Micro-computer

1. Terminal Layout



2. Key matrix

	KEY IN 0	KEY IN 1	KEY IN2	KEY IN3
KEY OUT 1	①	③	⑦	⑨
KEY OUT 2	④	②	⑤	
KEY OUT 3	⑩	⑥	⑧	PROGRAM
KEY OUT 4		⏮	EDIT MODE	⏭
KEY OUT 5	SIDE A/B	TIME	FADE MODE	
KEY OUT 6	REPEAT ALL / 1	RANDOM	DISPLAY	+ 10
KEY OUT 7	PLAY / PAUSE	OPEN / CLOSE	CANCEL	STOP / CLEAR

3. Pin Description

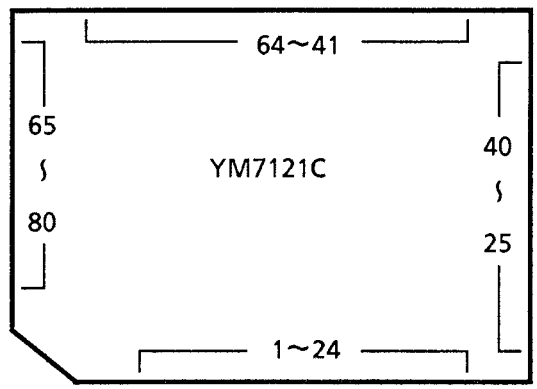
Pin No.	Symbol	I/O	Functions and Operations	Pin NO.	Symbol	I/O	Functions and Operations
1~4	8G~5G	O	FL grid control output	35	(D IN) SO	O	Serial data output for IC841
5	S9	O	FL segment control output	36	WQ	I	Write request signal input
6~9	4G~1G	O	FL grid control output	37	L.ON	O	Laser on signal output
10~17	S1~S8	O	FL segment control output	38	KEYO4	O	Key matrix output
18	NC	--	Non connection	39	P.OFF	O	Power off signal output
19	-VDISP	I	FL Power supply	40	GRAPH.MU	O	Graphic mute signal output
20	MUTE	O	Mute signal output	41	KEYO5	O	Key matrix output
21	GND	--	Ground	42~44	KEY OUT1 ~ KEY OUT3	O	Key matrix output
22	GND	I	Ground	45~48	KEY IN0 ~ KEY IN3	I	Key matrix input
23	R/W	O	Read / Write signal output	49	RESET	I	Reset signal input
24	$\overline{\text{CLOSE SW}}$	I	Close switch : active low	50	TEST	I	Test mode input : connected to + 5V
25	$\overline{\text{OPEN SW}}$	I	Open switch : active low	51	OSC 1	I	Clock Oscillation input
26	$\overline{\text{RESET SW}}$	I	Reset switch : active low at the inmost position of pickup	52	OSC 2	O	Clock Oscillation output
27	$\overline{\text{TEST}}$	I	Test mode input	53	GND	--	Ground
28	CLOSE	O	Close signal output	54	KEYO6	O	Key matrix output
29	OPEN	O	Open signal output	55	$\overline{\text{DCS IN}}$	I	Compu-link signal input
30	TLOF	O	Tracking servo off signal output	56	$\overline{\text{DCS OUT}}$	O	Compu-link signal output
31	GU	O	Tracking gain up signal output	57	KEYO7	O	Key matrix output
32	VCC	--	+ 5V	58~60	NC	--	Non connection
33	$\overline{\text{SCK}}$	O	Clock output for IC841	61	12G	O	FL grid control output
34	(D OUT) SI	I	Serial data input from IC841	62~64	11G~9G	O	FL grid control output

■ YM7121C(IC841)

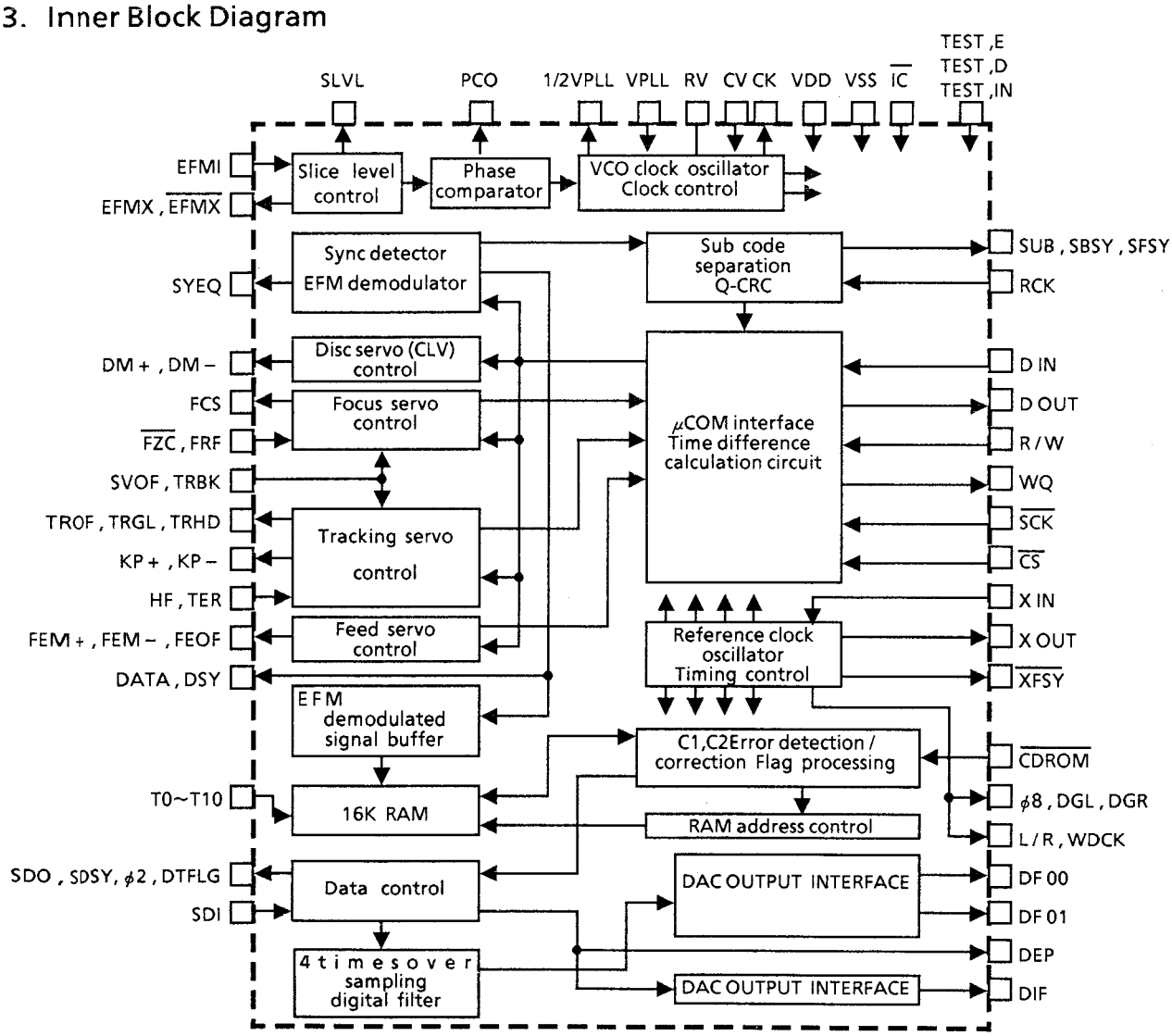
1. Outline

YM7121 is a C-MOS LSI for signal processing and servo control (SVC) in a CD player. It is used for the demodulation of the EFM signal from the laser pick up , detection / correction of the error signal , signal processing in digital filtering , etc. and for various servo controls (focusing , disc , tracking and feed servos).
And it contains digital interface which output the audio digital signals in S-RAM and CD-player. This digital interface matches EIAJ standards.

2. Top View



3. Inner Block Diagram



4. Terminal Function

Pin No.	Symbol	I/O	Function and Operation
1	CV	I	Adequate time constant is added to this terminal and input the PCO output. This makes the structure of clock reproduce circuit by inner VCO circuit.
2	RV	–	RV terminal is standard voltage terminal of inner VCO. And capacity for stabilizing is added to this terminal.
3 32 72	VDD	–	These are +5V power supply terminals.
4 5 70	TEST. IN TEST. E TEST. D	I I I	These terminals are for test.
6	SYEQ	O	This is the check output terminal, it becomes high when flame synchronizing signal detected from EFM pattern coincides frame synchronizing signal from internal counter.
7 8	DSY DATA	O O	Not used.
9	CK	O	CK has 4.3218 MHz clock.
10~19	T0~T9	I	This terminal is internal RAM test terminal, and connected GND.
22	DEP	O	De-emphasis is necessary when this terminal is high.
23	DIF	O	DIF is digital audio interface format output matched EIAJ standards.
24	SDO	O	SDO is a serial signal output of $\phi 2$ bit rate. (The MSB puts in at first.)
25	SDI	I	SDI is the input terminal of 4 times over sampling digital filter. It is usually connected with SDO.
26	SDSY	O	Not used.
27	DTFLG	O	Not used.
28	$\phi 2$	O	Not used.
29, 52, 77,66	VSS	–	GND
30	XOUT	O	Not used.
31	XIN	I	Input from crystal clock.
33	$\overline{\text{XFSY}}$	O	Not used.
34 35 36 37	SUB SBSY RCK SFSY	O O I O	After detecting that SBSY changes from low to high by IC991, the sub-code(P~W) can be output from SUB output terminal by inputting 8 clocks to RCK terminal at every point where SFSY changes low to high.
38	$\overline{\text{CDROM}}$	O	Not used.
39	$\phi 8$	O	$\phi 8$ is 8.4672MHz crystal clock.
40	WDCK	O	Not used.
41	L/R	O	This is synchronizing signal for data transfer and it connects with DAC.
42 43	DGL DGR	O O	Not used.
44 45	DF01 DF00	O O	Serial data output.(Right channel). Serial data output.(Left channel).
46	$\overline{\text{SCK}}$	I	This terminal is connected to μCOM. It is an input terminal that carries the clock signal for data transfers.
47	R/W	I	This connects with microcomputer and it is an output terminal for switching data transmission mode. it enables to transmit data from SVC to microcomputer when R/M is "L" and from microcomputer to SVC when R/W is "H".
48	$\overline{\text{CS}}$	I	This is a chip select terminal for YM7121.
49	DOUT	O	This terminal is the data output terminal connected to μCOM. When R/W is low, data is transferred from YM7121 to μCOM, according to theSCK clock input.

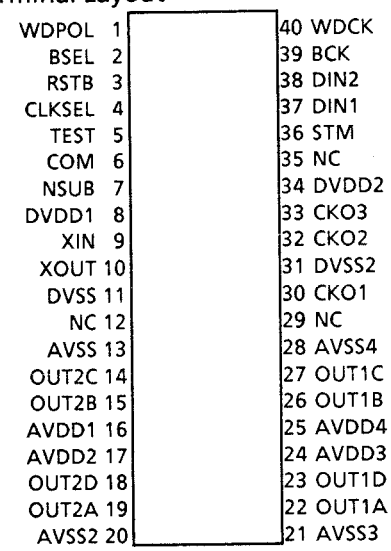
Pin No.	Symbol	I/O	Function and Operation
50	WQ	O	This terminal is connected to μCOM. It is a request signal which demands to μCOM inputting the data transfer (YM7121 to μCOM).
51	DIN	I	This is a data input terminal connected to μCOM. When R/W is high, the data is transferred from μCOM to YM7121 according to the SCK clock input.
53 54	DM+ DM−	O O	These terminals output the PWM to control the speed of spindle motor. The speed of the motor goes up when DM+ is high, and slows down when DM− is high: both terminals can not become high simultaneously.
55 56 60 61 62 63 64	HF TER TRHD TRGL TROF KP− KP+	I I O O O O O	When tracks are being crossed during serches, the amplitude variation of the generated HF signal is sampled at the zero − cross point of the tracking error signal TER and the TROF signal is output. The level variations of this signal turn the servo on and off, greatly facilitaing track acquisition. KP+ or KP− is output to conduct tracking, and TRHD is output during tracking to cause generation of the tracking error signal. The TRGL signal is for increasing the tracking gain after tracking is completed.
57 58 59	FEM+ FEM− FEOF	O O O	The FEM+ and FEM− are output as high speed feed signals, and FEOF signal is output for cutting the feed servo during high speed feed.
65	TRBK	I	TRBK is input to apply tracking brake from outside. TRGL becomes low with high input and inner control signal TBKE becomes high.
67 68 69	$\overline{\text{FZC}}$ FCS FRF	I O I	These terminals are used for controlling the focus servo. The FCS is for a leading signal of Focusing; the signal, generated when the focus point is achieved, terminate the focusing operation; and FCO flag is dropped internally by FRF signal generated when reflected light is detected.
71	$\overline{\text{IC}}$	I	YM7121 needs initializing when power supply turn on. IC will be low more than 400μs since XIN is input clock with VDD standard.
73 74 75	SLVL $\underline{\text{EFMX}}$ EFMX	O O O	Amplitude limited, mutually anti-phased signals are output from EFMX and $\overline{\text{EFMX}}$. Slice level is controlled by these signals and external amplifier. SLVL is output amplitude alteration component of both terminals. When integral circuit is connected to external. YM7121 easily can control slice level.
76	EFMI	I	This terminal is input EFM signal. (1~2 Vpp)
78	PCO	O	This terminal outputs the phase difference when the polarity of the clock and the EFM pattern changes.
79	VPLL	I	This terminal is input D.C. voltage matched VCO free run frequency. (17.2872 MHz)
80	1/2 VPLL	O	This terminal outputs a half of VPLL input, and capacity for stabilizing is added to this terminal.

■ JCE4501(IC873) : D / A CONVERTER

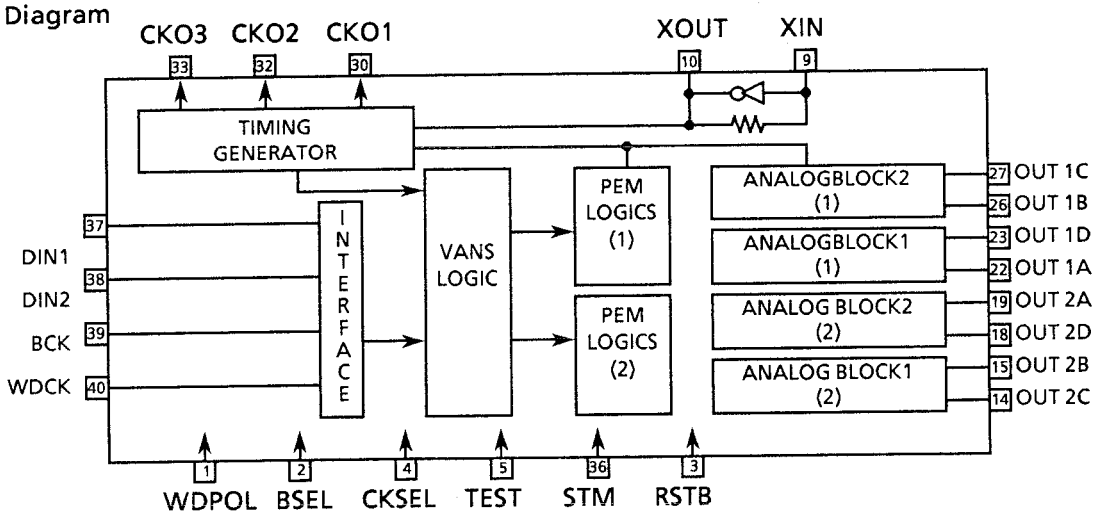
1. Outline

The JCE4501 is a CMOS digital-analog converter with independent left and right channels. It was developed for PCM digital audio equipment.I t features pulse edge modulation (PEM) and Victor advanced noise shaping (VANS) for resolution equipment to 20 bits(0-20kHz) and a low distortion ratio. At JVC, this type of digital-analog converter is called a DD converter.

2. Terminal Layout



3. Block Diagram

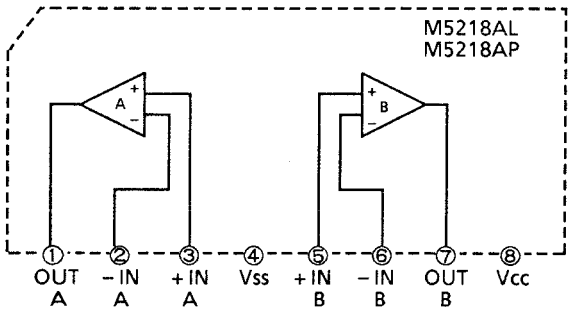


4.Description

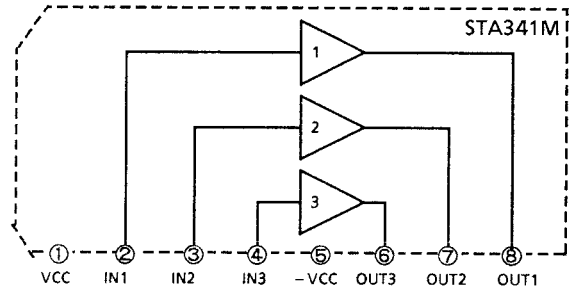
Pin No	Symbol	I/O	Description	Pin No	Symbol	I/O	Description
1	WDPOL	I	Word data polarity switching pin	21	AVSS3	--	Analog ground pin 3
2	BSEL	I	H:CDX2554P format,L: YM3414 format	22	OUT1A	O	Not used
3	RSTB	I	Reset pin (low active)	23	OUT1D	O	1D PEM output pin
4	CLKSEL	I	H: 256fs mode,L: 384fs mode	24	AVDD3	--	Analog power supply pin 3
5	TEST	I	Test mode switching pin	25	AVDD4	--	Analog power supply pin 4
6	COM	I	COM board voltage fastening pin	26	OUT1B	O	Not used
7	NSUB	I	Silicon board voltage fastening pin	27	OUT1C	O	1C PEM output pin
8	DVDD1	--	Digital power supply pin 1	28	AVSS4	--	Analog ground pin 4
9	XIN	I	Crystal oscillator input pin	29	NC	--	To ground
10	XOUT	O	Crystal oscillator output pin	30	CKO1	O	Clock output pin 1(384fs output)
11	DVSS1	--	Digital ground pin 1	31	DVSS2	--	Digital ground pin 2
12	NC	--	To ground	32	CKO2	O	Clock output pin 2(192fs output)
13	AVSS1	--	Analog ground pin 1	33	CKO3	O	Clock output pin 3(128fs output)
14	OUT2C	O	2C PEM output pin	34	DVDD2	--	Digital power supply pin 2
15	OUT2B	O	Not used	35	NC	--	Non connection
16	AVDD1	--	Analog power supply pin 1	36	STM	I	Stereo/Monaural switching pin H: stereo,L:left channel,reversed polarity left channel
17	AVDD2	--	A nalog power supply pin 2	37	DIN1	I	Left channel 18-bits 8Fs serial data input
18	OUT2D	O	2D PEM output pin	38	DIN2	I	Right channel 18-bits 8Fs serial data input
19	OUT2A	O	Not used	39	BCK	I	Bit clock input pin
20	AVSS2	--	Analog ground pin 2	40	WDCK	I	Word clock input pin

Internal Block Diagrams of Other ICs

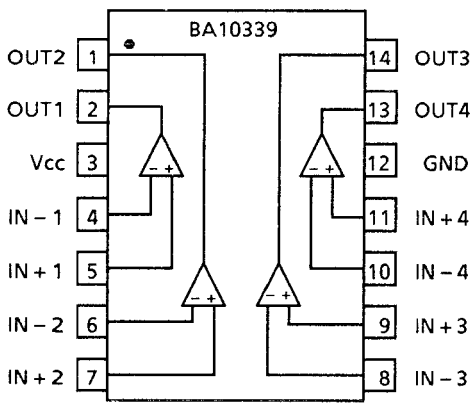
■ M5218AL (IC 762,781,803)
M5218AP (IC 871) : Dual OP Amp.



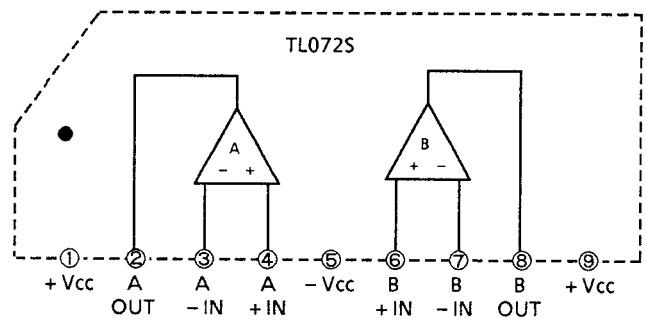
■ STA341M (IC761) : Motor Driver



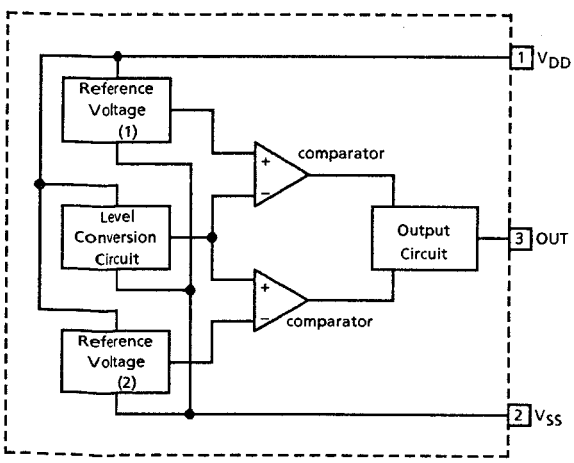
■ XRA10339 (IC802) : Comparator



■ TL072S (IC801) : Dual OP Amp.



■ MN1280 (P.Q). : IC992 RESET IC

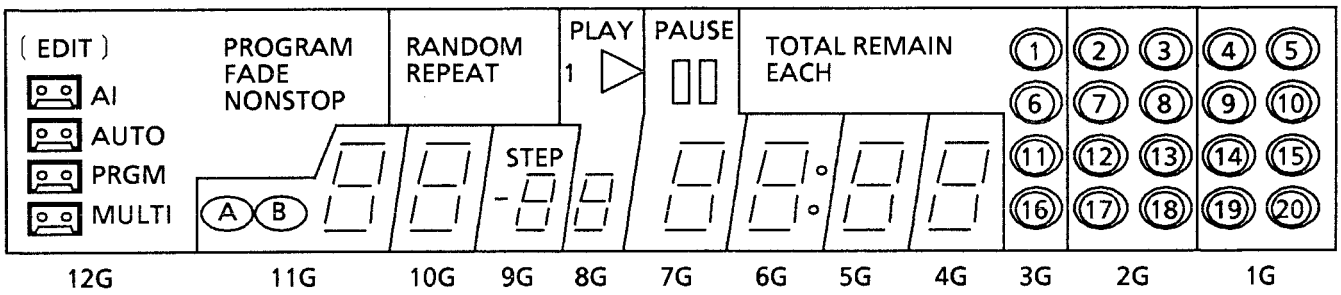


Pin No.	Pin Name	Functions
1	V_{DD}	Power supply
2	V_{SS}	Ground
3	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.

Internal Connections for the FL Display Tube

■ ELU0001-140:(FL991)

1. Grid Layout



2. Pin Connections

TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ELECTRODE	F1	F1	NP	NP	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	P8	P7	P6	P5	P4	P3

TERMINAL NO.	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43			
ELECTORODE	P2	P1	NP	1G	2G	3G	4G	P9	5G	6G	7G	8G	9G	10G	11G	12G	NP	NP	F2	F2			

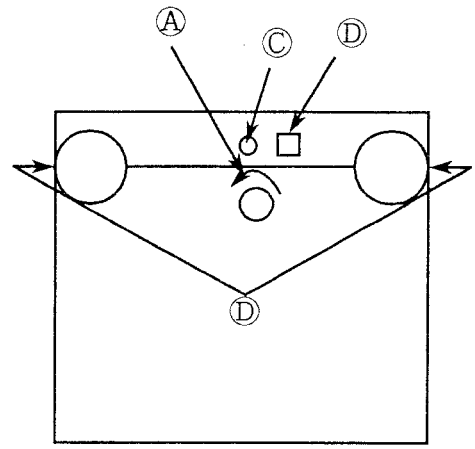
(Note) F : Filament G : Grid NP : NoPin NC : No Connection P1~P9 : Anode

3. Anode Connection Table

	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	AI&MARK	a	a	a	a	a	a	a	a	(1)	(2)	(4)
S2	AUTO&MARK	b	b	b	b	b	b	b	b	(6)	(7)	(9)
S3	PRGM&MARK	c	c	c	c	c	c	c	c	(11)	(12)	(14)
S4	MULTI&MARK	d	d	d	d	d	d	d	d	(16)	(17)	(19)
S5	FADE	e	e	e	e	e	e	e	e	TOTAL	(3)	(5)
S6	NONSTOP	f	f	f	f	f	f	f	f	EACH	(8)	(10)
S7	(EDIT)	g	g	g	g	g	g	g	g	REMAIN	(13)	(15)
S8	PROGRAM	(A)	RANDOM	STEP	REPEAT (1)	----	----	----	----	----	(18)	(20)
S9	----	(B)	REPEAT	(–)	PLAY >	PAUSE	DP (:)	----	----	----	----	----

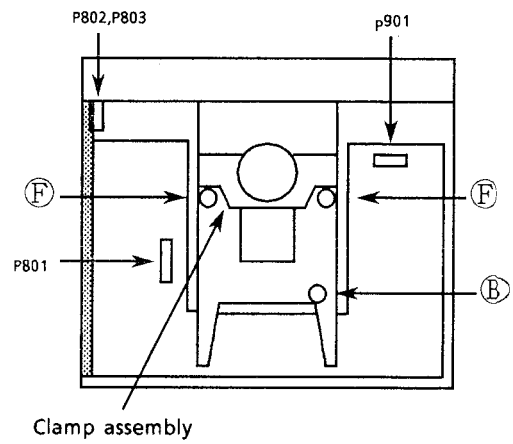
Disassembly Procedures

1. Removing the top cover
(1) Remove the 2 screws on both sides of the top cover and the 4 screws on the rear side .
(2) Gently spread both sides of the top cover to the outside, lift up the rear section, and remove the top cover.



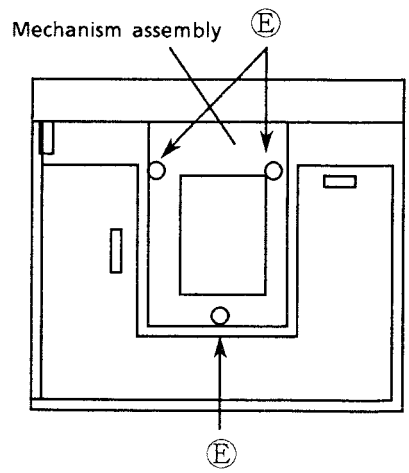
2. Removing the tray
(1) Remove the top cover.
(2) Switch on the power of RX-MXG9BK .
Press the OPEN / CLOSE switch to bring the tray forward and with the tray forward, switch off the power.
(3) Remove the screw on the tray Ⓑ.
(4) Pull the tray toward the front to move it.

Note
If the power does not come on due to breakdown or the, insert a Philips screwdriver through the hole at the bottom of the front panel and turn it counter-clockwise to bring the tray forward Ⓐ.



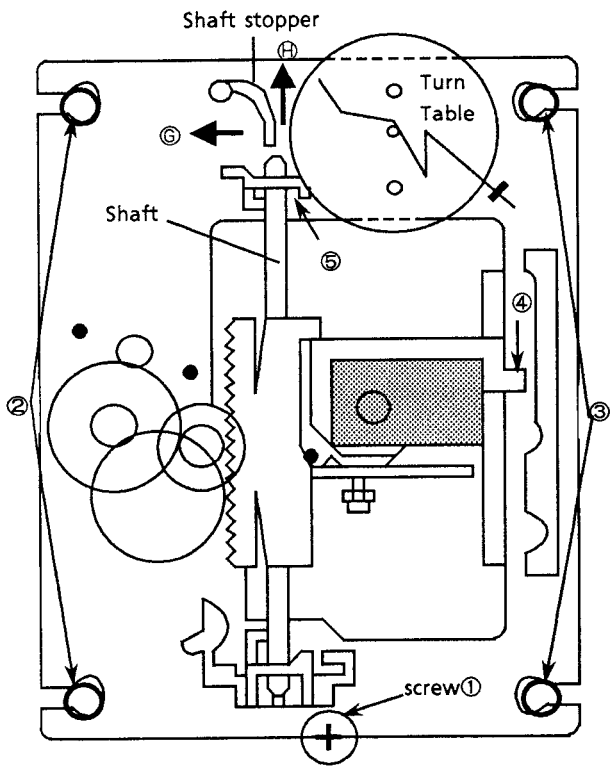
3. Removing the front panel assembly
(1) Remove the top cover.
(2) Remove the connectors (P901) connecting with main P.C. Boards.
(3) Remove the screw Ⓒ
(4) Remove the 3 hooks Ⓓ to remove the front panel.

4. Removing the mechanism assembly
(1) Remove the top cover .
(2) Remove the tray .
(3) Remove the connectors (P801, P802,P803) .
(4) Remove the 2 screws Ⓕ holding the clamp assembly, then remove it.
(5) Remove the 3 screws Ⓔ holding the mechanism assembly.

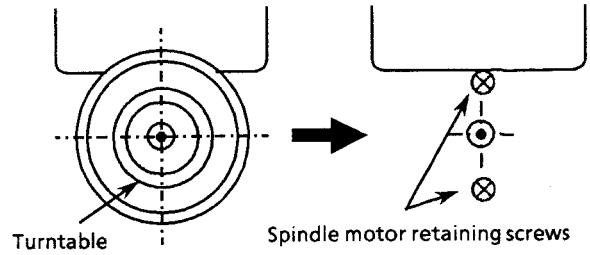


7. Removing the Laser Pickup
1) Remove the metal cover, tray assembly and the clamp.
2) Remove the screw ① from the Mecha Base assembly.
3) Remove the Mecha Base assembly from the rubber cushion ②③.
4) Move the Shaft stopper from the rest position to the left side Ⓖ.
5) Remove the Pickup Shaft from the Mecha Base assembly.(Slide the Pickup shaft to the up sideⒽ)
6) Remove the CD Pick Unit with the shaft.

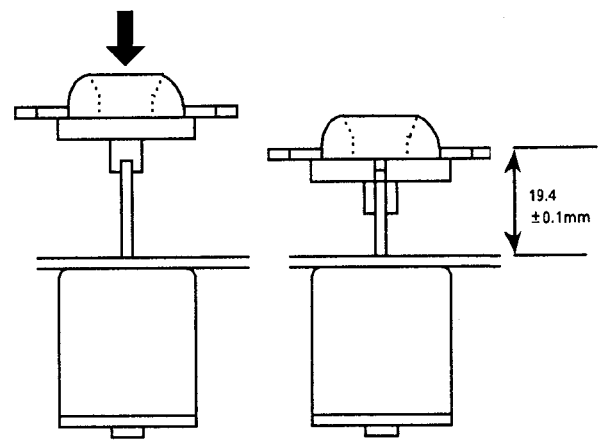
8. Installing the Laser Pickup (See page 1-14)
(See page1-15**(Before installing the pickup)**)
1) Connect the Flat wire with the connectors of APC (Automatic Power Control) P.C.Board.
2) While installing the ④ in the CD Support, set the shaft on the base hook⑤.
3) Install the Mecha Base assembly to the rubber cushion ②③.



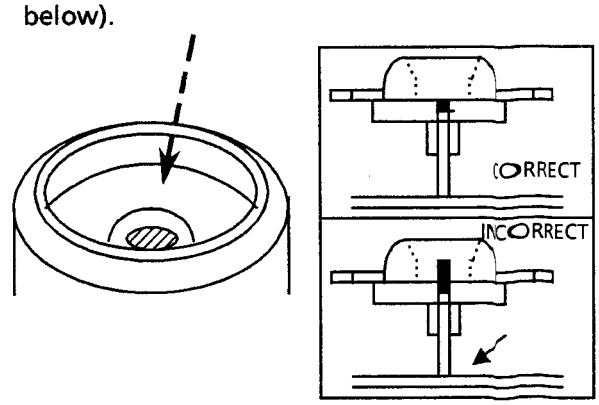
9. Removing the spindle motor
1) Remove the Mechanism assembly.
2) Remove the turntable, and remove the two screws retaining the spindle motor.
3) Remove the screw retaining the spindle and the Feed Motor P.C. Board and unsolder it.



10. Installing the spindle motor
1) Tighten the 2 screws to the same torque.
2) Fasten the Spindle and the Feed Motor P.C. Board with the screw and solder.
3) Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mechanism base to the top of the turntable is exactly 19.4 ± 0.1mm.

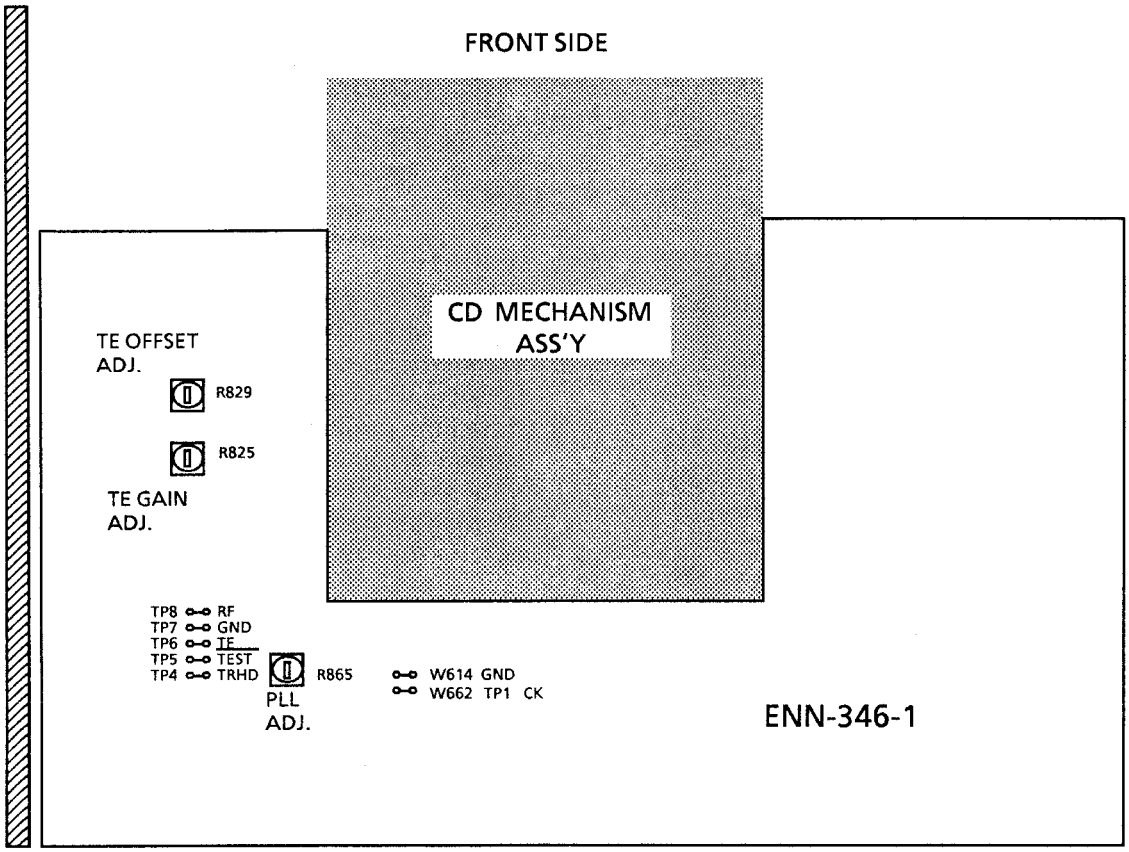


4) After insertion is complete, bond the motor shaft and turntable together (at the section marked by an arrow in the figure on the left below).



5) Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get onto the turntable. Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an allow in the figure on the right).

Adjustment Procedures



*** Use RX-MXG9BK when adjusting.**

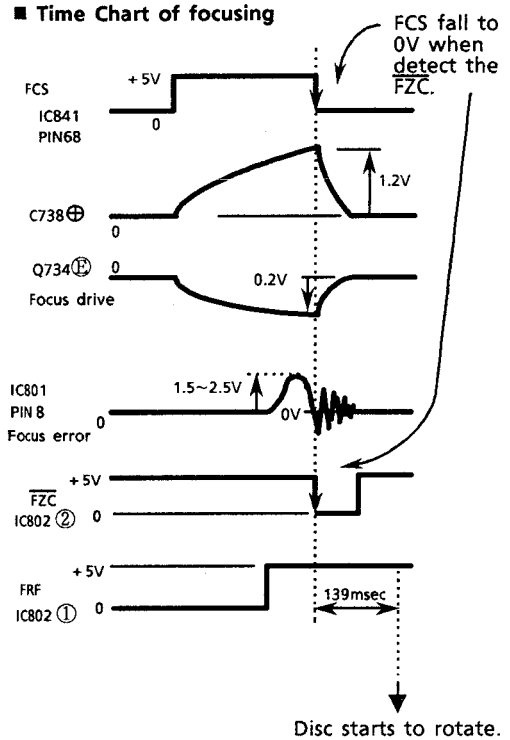
1. PLL free-running adjustment
   1) Measuring instrument
      Frequency counter
   2) Adjusting procedure
      (1) Connect a frequency counter with TP1 (CK:W662) and W614 (GND) on the main PC board.
      (2) Adjust R865 for setting the frequency counter's value becomes 4.295 ± 0.005MHz.

2. Tracking gain adjustment
   1) Measuring instruments
      Oscilloscope, Normal disc
   2) Adjusting procedure
      (1) Connect an oscilloscope with TP6 (TE) and TP7 (GND) on the main PC board.
      (2) Play a disc.
      (3) Short circuit TP5 (TEST) to TP7 (GND).
      (4) Adjust R825 for setting tracking error signal becomes 2.0 V_{P-P}.

3. Tracking offset adjustment
   1) Measuring instruments
      Oscilloscope, Normal disc
   2) Adjusting procedure
      (1) Connect an oscilloscope with TP6 (TE) and TP7 (GND) on the main PC board.
      (2) Play a disc.
      (3) Short circuit TP5 (TEST) to TP7 (GND).
      (4) Adjust R829 for setting the DC level of the tracking error (off set) becomes 0.

Flow of Functional Operation Until TOC is Read

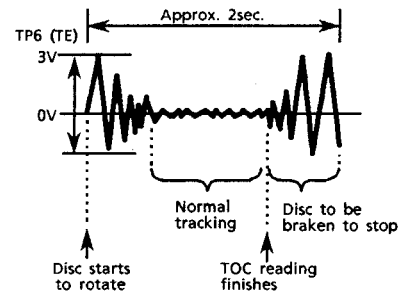
■ **Time Chart of focusing**



- When the lens moves up and down in a 2-seconds interval, FZC is not output.
- When the lens moves up and down in less than 1-second, FRF is not output or the focus servo loop is abnormal.

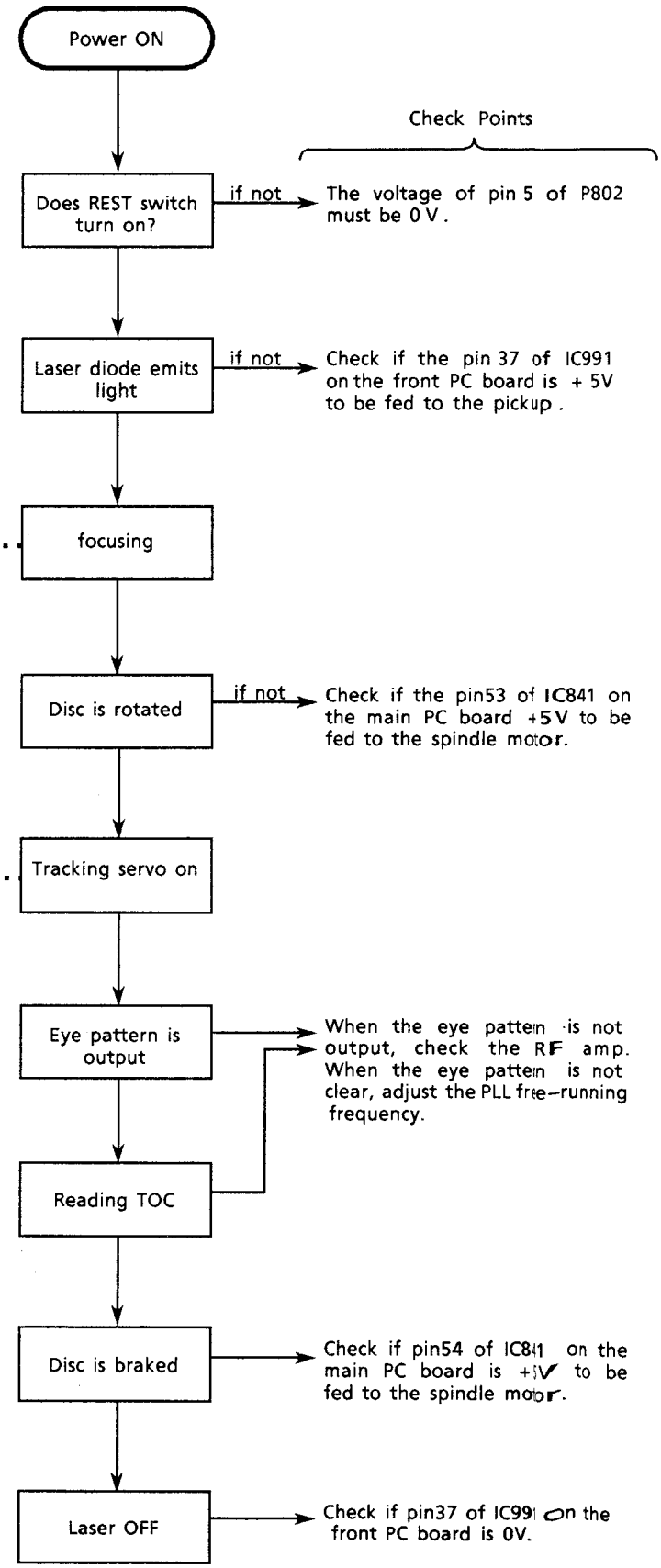
Fig-1

■ **Tracking error waveform at TOC reading**



■ **When the tracking loop does not turn ON, check the tracking offset and align it to 0.**

Fig-2


Power ON
Check Points
Does REST switch turn on?
if not
The voltage of pin 5 of P802 must be 0 V.
Laser diode emits light
if not
Check if the pin 37 of IC991 on the front PC board is + 5V to be fed to the pickup.
focusing
Disc is rotated
if not
Check if the pin53 of IC841 on the main PC board +5V to be fed to the spindle motor.
Tracking servo on
Eye pattern is output
When the eye pattern is not output, check the RF amp. When the eye pattern is not clear, adjust the PLL free-running frequency.
Reading TOC
Disc is braked
Check if pin54 of IC841 on the main PC board is +5V to be fed to the spindle motor.
Laser OFF
Check if pin37 of IC991 on the front PC board is 0V.

Maintenance of Laser Pickup

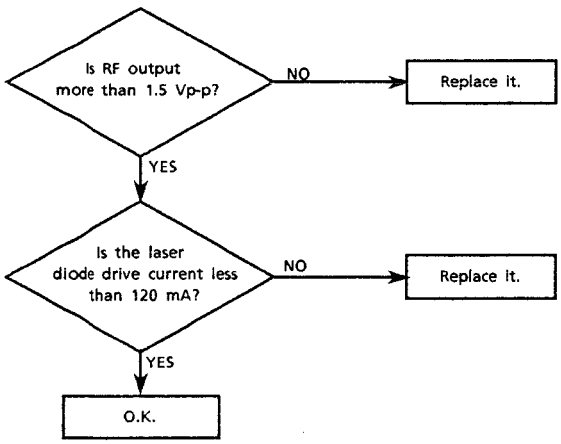
1. Life of the laser diode

When the life of the laser diode has expired, the following symptoms will appear.

(1) The level of RF output (EFM output: amplitude of eye pattern) will be low.

(2)The drive current required by the laser diode will be increased.

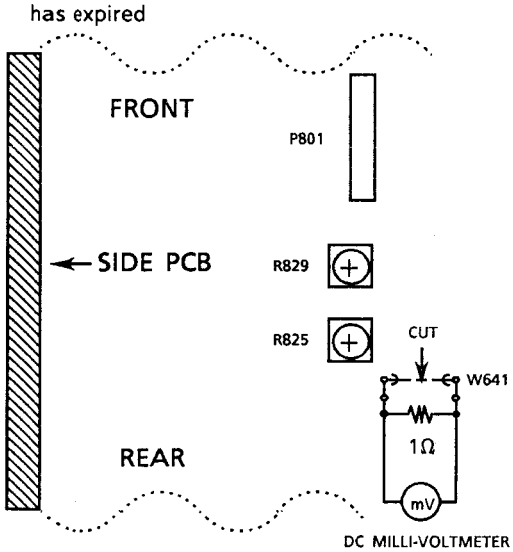
In such a case, check the life of the laser diode following the flowchart below



2. Measurement of laser diode drive current

Replace the jump wire (W641) shown below with the resistor (1Ω).

Measure the voltage across the resistor with a milli-voltmeter. When the voltage is more than 120mV, it shows that the life of the laser diode has expired



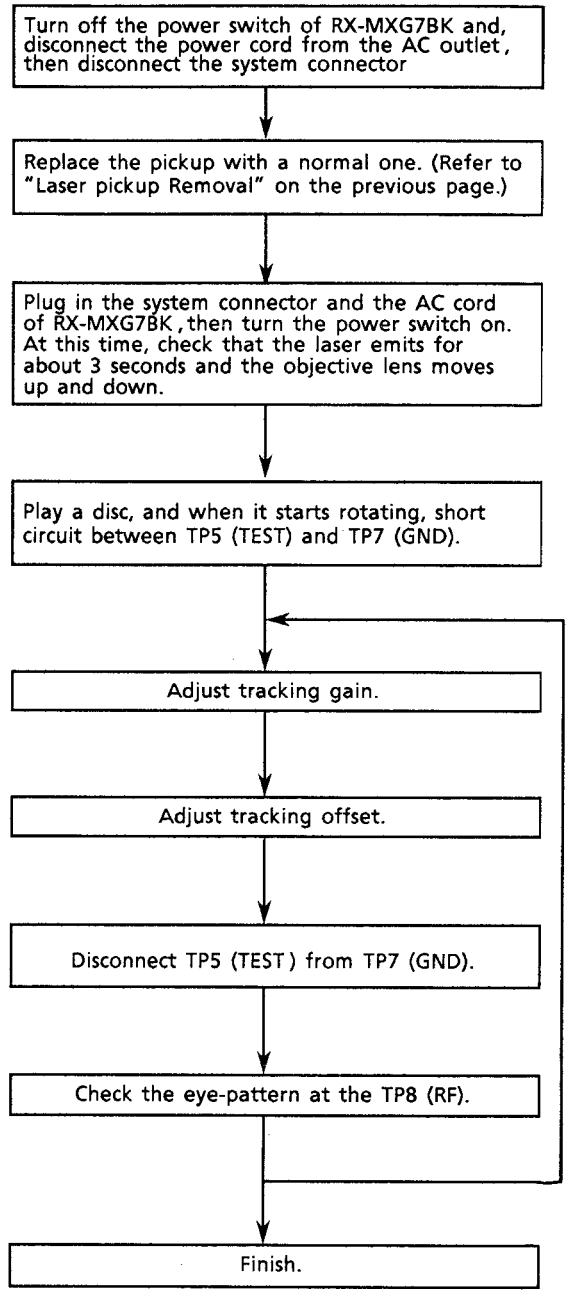
3. Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

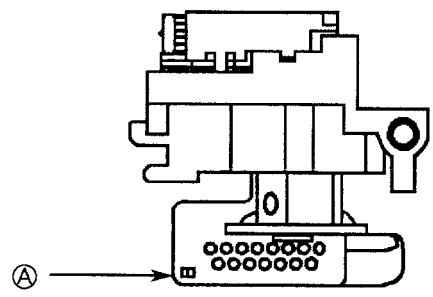
Replacement of Laser Pickup


Turn off the power switch of RX-MXG7BK and, disconnect the power cord from the AC outlet, then disconnect the system connector
Replace the pickup with a normal one. (Refer to "Laser pickup Removal" on the previous page.)
Plug in the system connector and the AC cord of RX-MXG7BK, then turn the power switch on. At this time, check that the laser emits for about 3 seconds and the objective lens moves up and down.
Play a disc, and when it starts rotating, short circuit between TP5 (TEST) and TP7 (GND).
Adjust tracking gain.
Adjust tracking offset.
Disconnect TP5 (TEST) from TP7 (GND).
Check the eye-pattern at the TP8 (RF).
Finish.

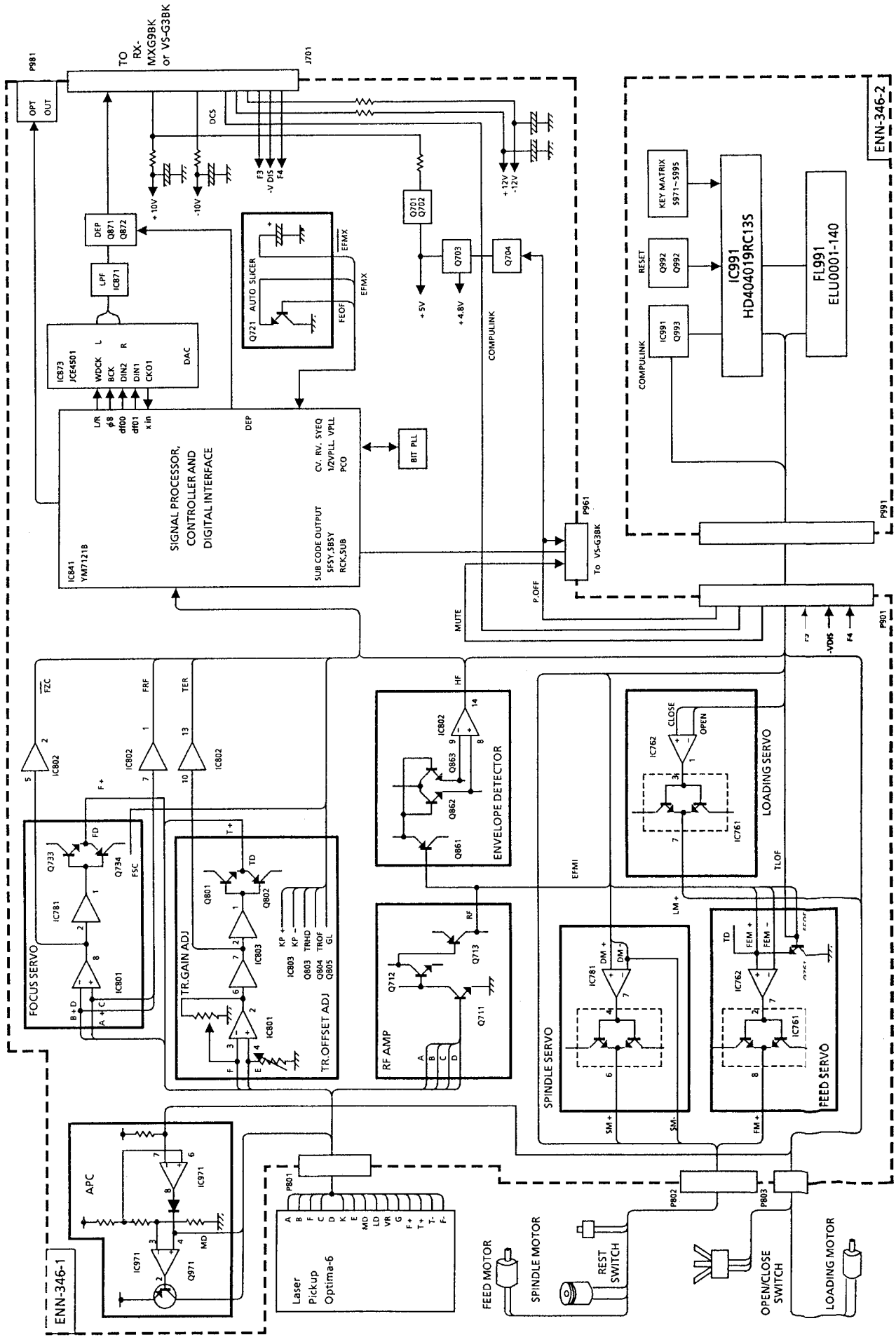
Note : Since one adjustment may affect other settings, repeat these adjustments a few times.

Before installing the pickup

Unsolder the part Ⓐ, which is used for countermeasure for static electricity.



Block Diagram

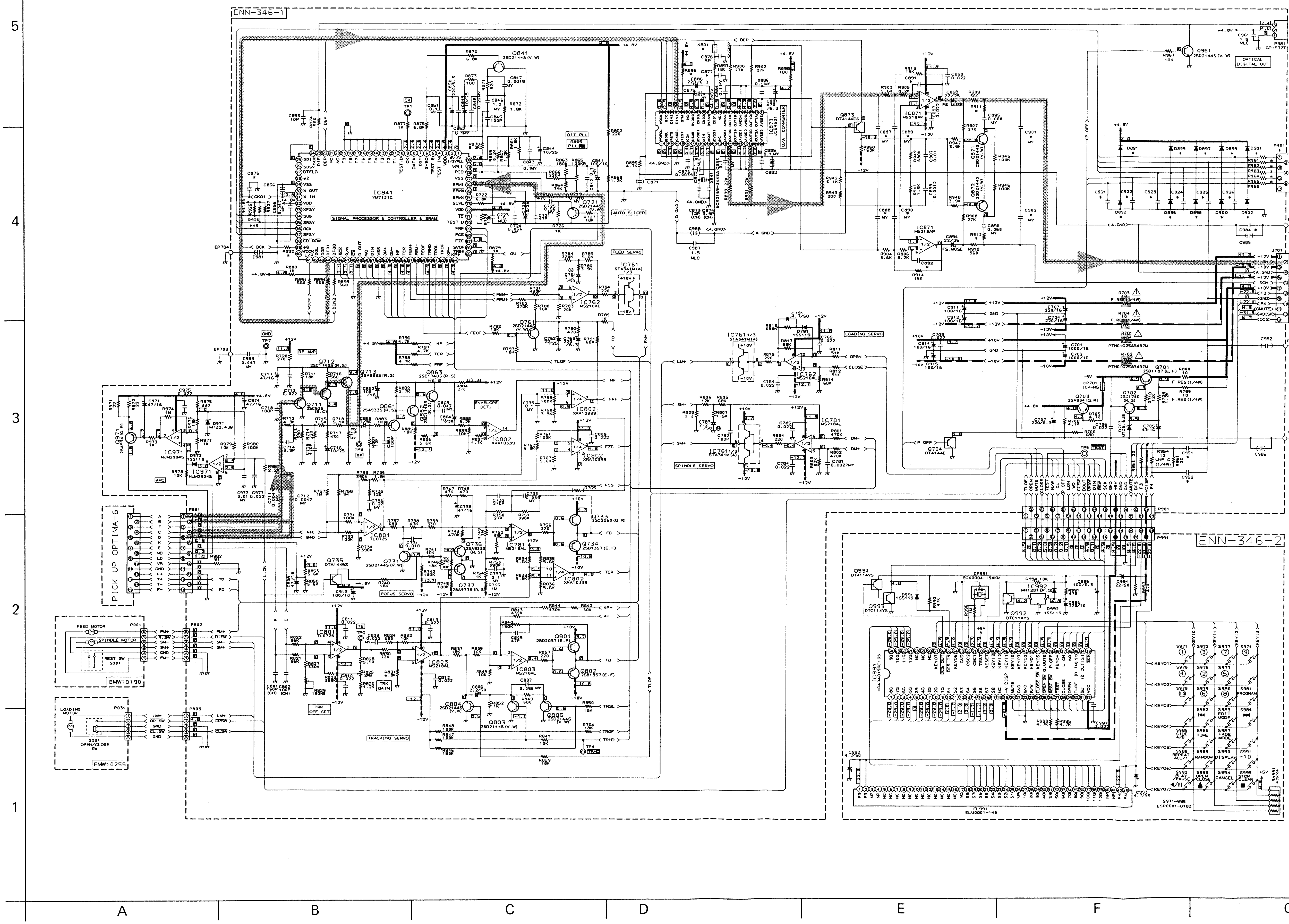


Schematic Diagram

■Tuner Section

Notes:

1. ——— indicates + B power supply.
2. - - - - - - indicates − B power supply.
3. ░░░ indicates main signal path.
4. When replacing the parts in the shaded are (░░░) and those marked with ⚠, be sure to use the designated parts to ensure safety.
5. The design and contents are subject to change without notice.

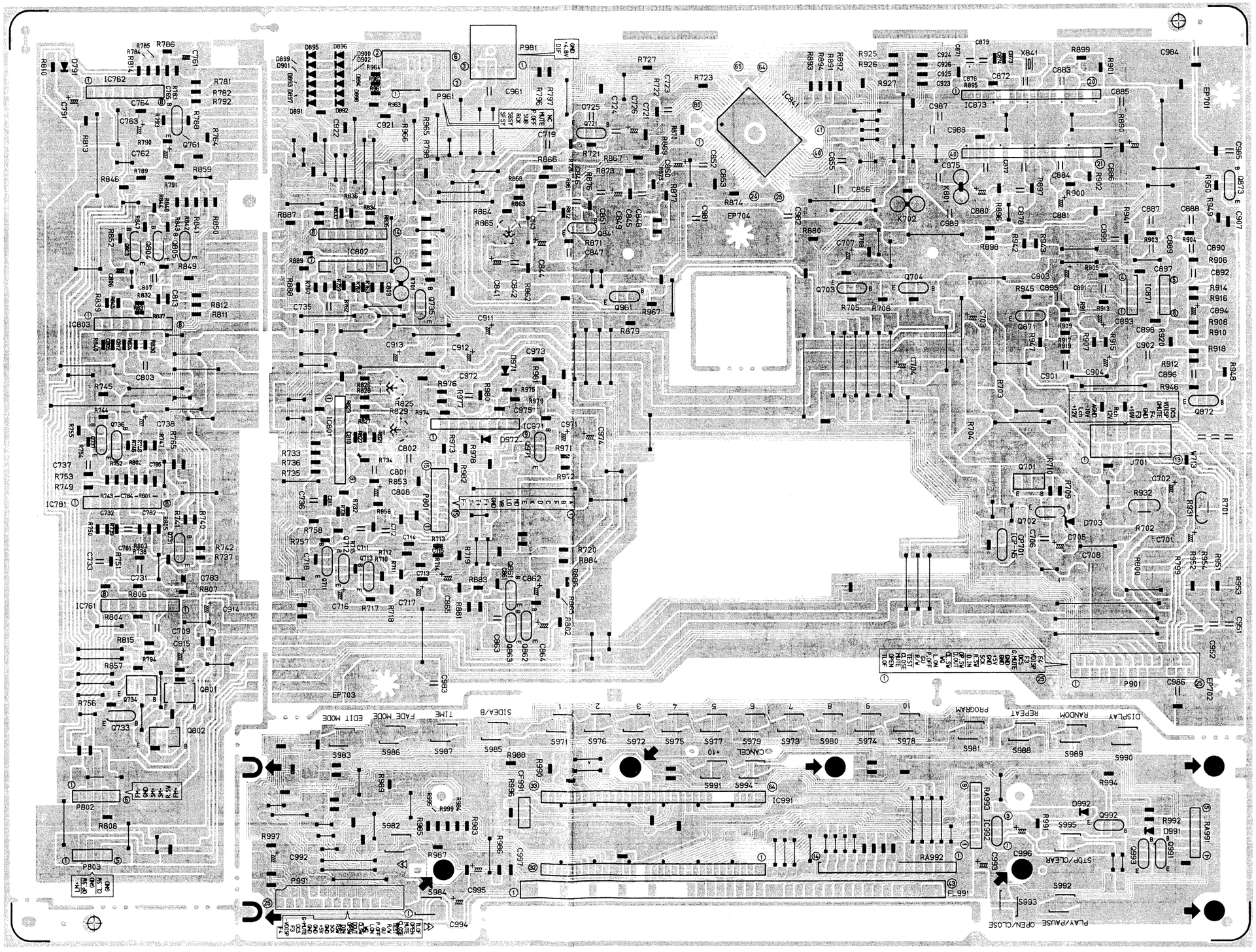


∗ MARK

SYMBOL / VERSION	F (U, UT, US)	G (A, BS, (F, EN))	H (G, GI)
C951	0.01	0.01	NONE
C952	0.01	0.01	NONE
R925 ~ R927	1K	NONE	NONE
R961 ~ R966	68	NONE	NONE
D891	68P	NONE	NONE
D892	68P	NONE	NONE
D895 ~ D902	1SS119	NONE	NONE
P961	USED	NONE	NONE
C887	680P	680P	0.001
C888	680P	680P	0.001
C889	680P	680P	0.0018
C890	680P	680P	0.0018
C891	150P	150P	120P
C892	150P	150P	120P
C901	NONE	NONE	0.012
C902	NONE	NONE	0.012
R911	220	220	180
R912	220	220	180
C921 ~ C926	68P	NONE	NONE
R892	560	560	2.2K
C984	0.047	0.047	NONE
C877	NONE	NONE	18P
R896	27	27	56
K801	NONE	NONE	ENZ8101-007T
C875	NONE	NONE	5P

Printed Circuit Board

■EMW10279-006 ENN-346



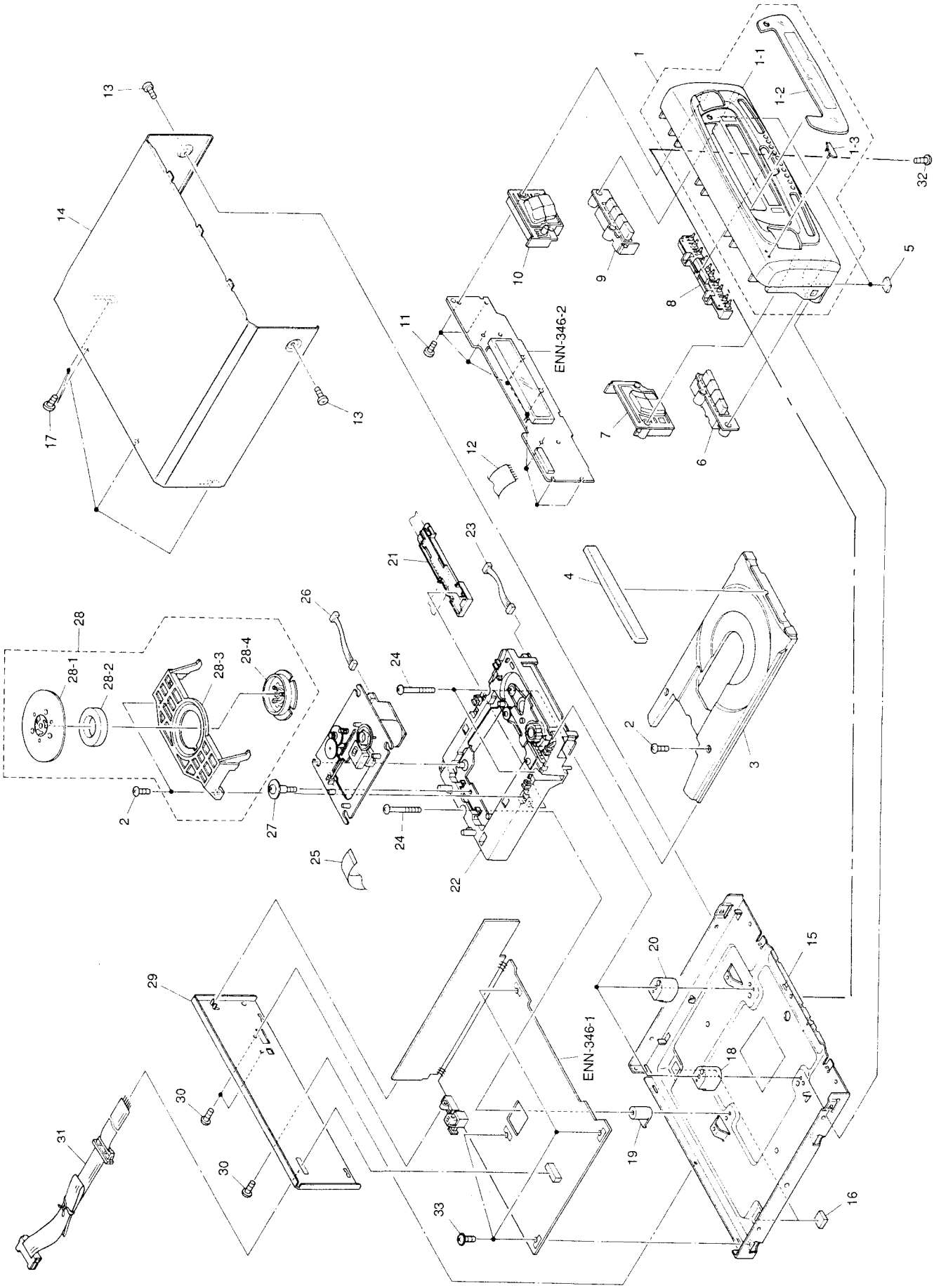
PARTS LIST

Note : All printed circuit boards and its assemblies are not available as service parts.

Contents

General Exploded View and Parts List 2-2
CD Mechanism Ass'y and Parts List 2-5
Printed Circuit Board Ass'y and Parts List 2-7
■ ENN-346☐ CD PC Board Ass'y 2-7

General Exploded View and Parts List



■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-XLMXG9BKE(S	FRONT PANEL ASSY	1		
	1-1	E102630-003	FRONT PANEL	1		
	1-2	E207658-002	CD W.SCREEN	1		
	1-3	E406971-221	JVC MARK	1		
	2	SBSF3008M	SCREW	3		
	3	E102358-222	CD TRAY	1		
	4	E308196-001	C.D FITTING	1		
	5	E406855-008	SPACER	1	FRONT FOOT	
	6	E207631-001	PUSH BUTTON	1	SKIP	
	7	E207627-001	PUSH BUTTON	1	SERACH	
	8	E207635-002	PUSH BUTTON	1	10KEY	
	9	E207633-001	PUSH BUTTON	1	EDIT	
	10	E207629-001	PUSH BUTTON	1	PLAY	
	11	SDSF2608Z	SCREW	8		
	12	EWR125K-15TT	FLAT WIRE	1		
	13	SDSG3008M	SCREW	2		
	14	E207626-001	METAL COVER	1		
	15	E102467-002	CD CHASSIS BASE	1		
	16	E406855-011	SPACER	2	REAR FOOT	
	17	E73273-003	SPECIAL SCREW	4		
	18	E308200-001	STAND	1		
	19	E308201-001	STAND	1		
	20	E308199-001	STAND	1		
	21	E308181-001	F.F.C. HOLDER	1		
	22	----------	CD MECHANISM ASSY	1	SEE PAGE 2-5	
	23	EWS265-B410	SOCKET WIRE	1		
	24	SBST3027Z	SCREW	3		
	25	EWPZ02-001	15PIN FFC CABLE	1		
	26	EWS266-B411	SOCKET WIRE	1		
	27	E406293-001	SPECIAL SCREW	1		
	28	E306837-005	C.D CLAMPER ASSY	1		
	28-1	E306836-003	C.D YOKE	1		
	28-2	E74897-002	C.D MAGNET	1		
	28-3	E26756-002	CD CLAMPER BASE	1		
	28-4	E306835-001	C.D CLAMPER	1		
	29	E207637-006	REAR PANEL	1		A
	29	E207637-006	REAR PANEL	1		BS
	29	E207637-006	REAR PANEL	1		EF
	29	E207637-006	REAR PANEL	1		EN
	29	E207637-006	REAR PANEL	1		G
	29	E207637-006	REAR PANEL	1		GI
	29	E207637-005	REAR PANEL	1		U
	29	E207637-005	REAR PANEL	1		US
	29	E207637-005	REAR PANEL	1		UT
	30	SBSG3008CC	SCREW	2		A
	30	SBSG3008CC	SCREW	2		BS
	30	SBSG3008CC	SCREW	2		EF
	30	SBSG3008CC	SCREW	2		EN
	30	SBSG3008CC	SCREW	2		G
	30	SBSG3008CC	SCREW	2		GI

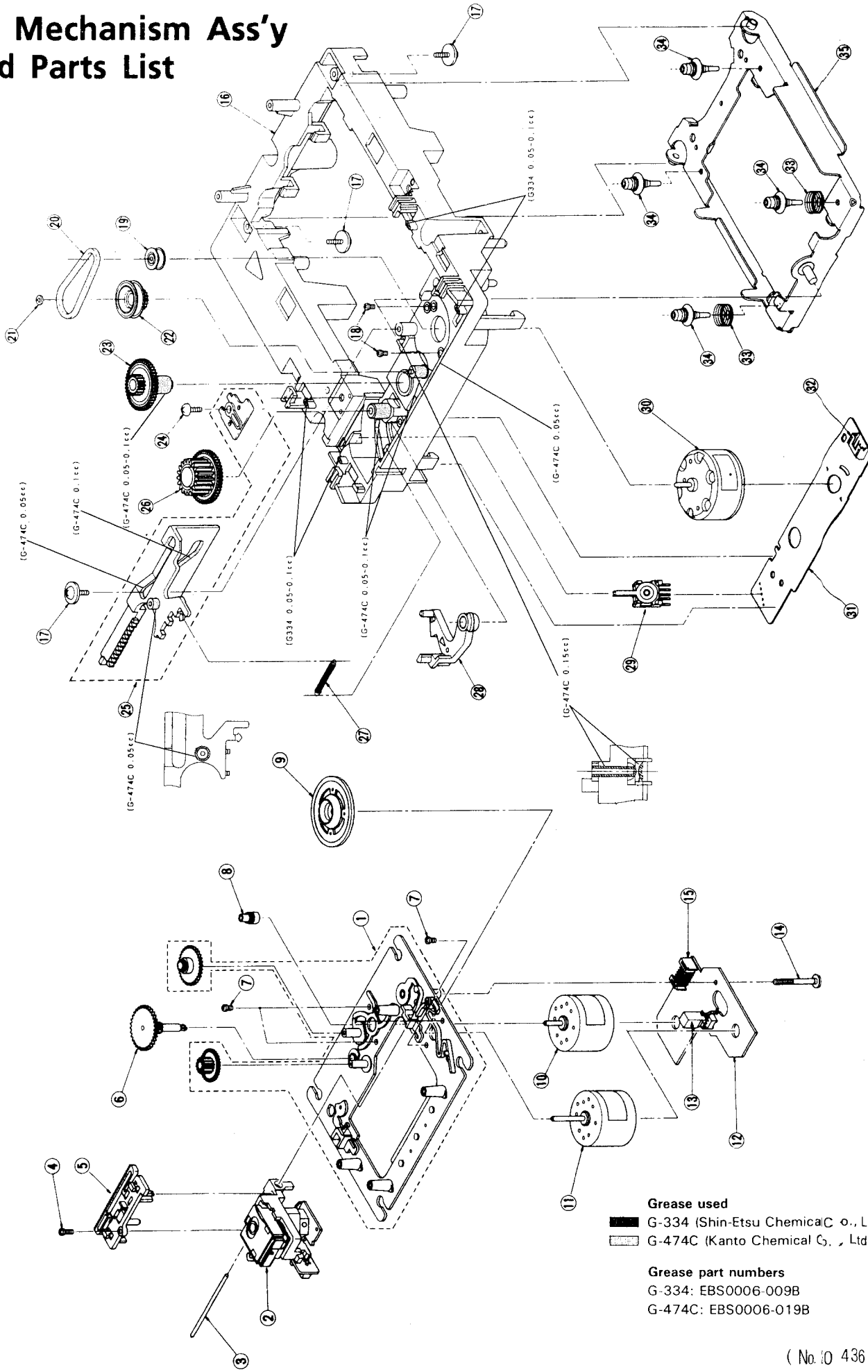
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	30	SBSG3008CC	SCREW	3		U
	30	SBSG3008CC	SCREW	3		US
	30	SBSG3008CC	SCREW	3		UT
	31	EWP907-016	PLUG CORD	1		
	32	SSST3006M	SCREW	1		
	33	GBSG3008CC	SCREW	4		
	-	E61029-005	NUMBER LABEL	1		
	-	E61029-011	NUMBER LABEL	1		
	-	E70891-001	CLASS 1 LABEL	1		
	-	E406507-001	MECHA C.LABEL	1		

⚠ : Parts List

The Marks for Designated Areas

A	Australia	BS	the U.K.	EF	Continental Europe
EN	ScandinaviaU	G	Germany	GI ...	Italy
U	Universal Type	US	Singapore	UT	Taiwan

CD Mechanism Ass'y and Parts List



Grease used

G-334 (Shin-Etsu Chemical C o., Ltd.)

G-474C (Kanto Chemical C o., Ltd.)

Grease part numbers

G-334: EBS0006-009B

G-474C: EBS0006-019B

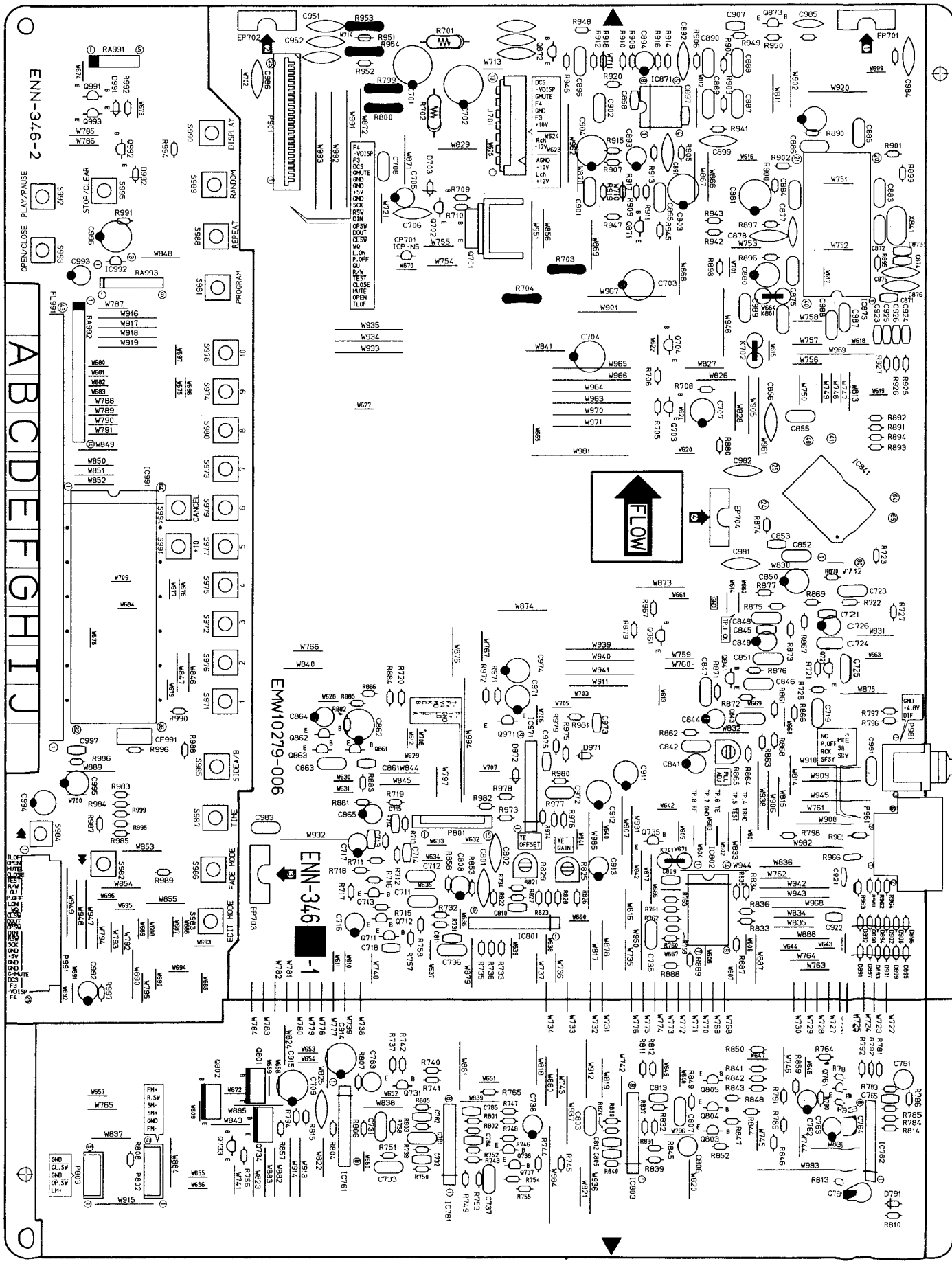
■ Parts List (CD Mechanism Ass'y)

Item	Part Number	Part Name	Q'ty	Description	Area
1	EPB-002A	MECHANISM BASE ASSY	1		
2	OPTIMA-6S	PICK UP ASS'Y	1		
3	E406777-001	SHAFT	1		
4	SDSF2006Z	SCREW	1		
5	E307746-001	CD RACK	1		
6	EPB-003A	MECHANISM BASE ASSY	1		
7	SDSP2003N	SCREW	4		
8	E406750-001	PINION GEAR	1		
9	EPB-001C	TURNTABLE	1		
10	E406784-001	DC MOTOR	1		
11	E406783-001	DC MOTOR	1		
12	EMW10190-001(S)	CIRCUIT BOARD	1		
13	ESB1100-005	LEAF SWITCH	1		
14	E75832-001	SPECIAL SCREW	1		
15	EMV5109-006B	PLUG ASSY	1	6PIN	
16	E102357-221	LOADING BASE	1		
17	E65923-003	SCREW	3		
18	SPSK2640Z	SCREW	2		
19	E75984-001	MOTOR PULLEY	1		
20	E75950-002	BELT	1		
21	E72024-001	SPEED NUT	1		
22	E75985-001	GEAR	1		
23	E75986-002	GEAR	1		
24	SBSF3008Z	SCREW	1		
25	E307252-221	CAM - PLATE	1		
26	E75987-001	REEL GEAR	1		
27	E75989-001	SPRING	1		
28	E307162-221	LEVER	1		
29	ESS1200-002	SLIDE SWITCH	1		
30	RF-500TB-12560	MOTOR	1		
31	EMW10255-002(S)	CIRCUIT BOARD	1		
32	EMV5109-005B	PLUG ASSY	1	5PIN	
33	E406871-001	SPRING	2		
34	E406294-002	INSULATOR	4		
35	E307179-221	ELEVATOR BASE ASSY	1		

Printed Circuit Board Ass'y and Parts List

■ENN-346 ☐ CD PC Board Ass'y

Note : ENN-346 ☐ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Designated Areas
ENN-346 F	U	Universal Type
	US	Singapore
	UT	Taiwan
ENN-346 G	A	Australia
	BS	the U.K.
	EF	Continental Europe
	EN	Scandinavia
ENN-346 H	G	Germany
	GI	Italy

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q701	2SB1187(E,F)	SILICON		
	Q702	2SC1740(R,S)	SILICON	ROHM	
	Q703	2SA934(Q,R)	SILICON	ROHM	
	Q704	DTA144ES	SILICON	ROHM	
	Q711	2SC535(B,C)	SILICON		
	Q712	2SC1740S(R,S)	SILICON	ROHM	
	Q713	2SA933S(R,S)	SILICON		
	Q721	2SD2144S(VW)	SILICON	ROHM	
	Q731	2SD2144S(VW)	SILICON	ROHM	
	Q733	2SC2060(Q,R)	SILICON	ROHM	
	Q734	2SB1357(E,F)	SILICON	ROHM	
	Q735	DTA144WS	SILICON	ROHM	
	Q736	2SA933S(R,S)	SILICON		
	Q737	2SA933S(R,S)	SILICON		
	Q761	2SD2144S(VW)	SILICON	ROHM	
	Q801	2SD2037(E,F)	SILICON	ROHM	
	Q802	2SB1357(E,F)	SILICON	ROHM	
	Q803	2SD2144S(VW)	SILICON	ROHM	
	Q804	2SD2144S(VW)	SILICON	ROHM	
	Q805	2SD2144S(VW)	SILICON	ROHM	
	Q841	2SD2144S(VW)	SILICON	ROHM	
	Q861	2SA933S(R,S)	SILICON		
	Q862	2SC1740S(R,S)	SILICON	ROHM	
	Q863	2SC1740S(R,S)	SILICON	ROHM	
	Q871	2SD2144S(VW)	SILICON	ROHM	
	Q872	2SD2144S(VW)	SILICON	ROHM	
	Q873	DTA144ES	SILICON	ROHM	
	Q961	2SD2144S(VW)	SILICON	ROHM	
	Q971	2SA934(Q,R)	SILICON	ROHM	
	Q991	DTA114YS	SILICON	ROHM	
	Q992	DTC114YS	SILICON	ROHM	
	Q993	DTC114YS	SILICON	ROHM	

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC761	STA341M(A)	I.C.	SANKEN	
	IC762	M5218AL	I.C.	MITSUBISHI	
	IC781	M5218AL	I.C.	MITSUBISHI	
	IC801	NJM072S	I.C.	DAINICHI	
	IC802	XRA10339	I.C.	EXAR JAPAN	
	IC803	M5218AL	I.C.	MITSUBISHI	
	IC841	YM7121C	I.C.	YAMAHA	
	IC871	M5218AP	I.C.	MITSUBISHI	
	IC873	JCE4501	I.C.	MATSUSHITA	
	IC971	NJM2904S	I.C.	DAINICHI	
	IC991	HD404019RC13S	I.C.	HITACHI	
	IC992	MN1281(P,Q)	I.C.	MATSUSHITA	

⚠ : SAFETY PARTS

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D703	MTZ5.6JB	ZENER	ROHM	
	D791	1SS119	SILICON	HITACHI	
	D891	1SS119	SILICON	HITACHI	U
	D891	1SS119	SILICON	HITACHI	US
	D891	1SS119	SILICON	HITACHI	UT
	D892	1SS119	SILICON	HITACHI	U
	D892	1SS119	SILICON	HITACHI	US
	D892	1SS119	SILICON	HITACHI	UT
	D895	1SS119	SILICON	HITACHI	U
	D895	1SS119	SILICON	HITACHI	US
	D895	1SS119	SILICON	HITACHI	UT
	D896	1SS119	SILICON	HITACHI	U
	D896	1SS119	SILICON	HITACHI	US
	D896	1SS119	SILICON	HITACHI	UT
	D897	1SS119	SILICON	HITACHI	U
	D897	1SS119	SILICON	HITACHI	US
	D897	1SS119	SILICON	HITACHI	UT
	D898	1SS119	SILICON	HITACHI	U
	D898	1SS119	SILICON	HITACHI	US
	D898	1SS119	SILICON	HITACHI	UT
	D899	1SS119	SILICON	HITACHI	U
	D899	1SS119	SILICON	HITACHI	US
	D899	1SS119	SILICON	HITACHI	UT
	D900	1SS119	SILICON	HITACHI	U
	D900	1SS119	SILICON	HITACHI	US
	D900	1SS119	SILICON	HITACHI	UT
	D901	1SS119	SILICON	HITACHI	U
	D901	1SS119	SILICON	HITACHI	US
	D901	1SS119	SILICON	HITACHI	UT
	D902	1SS119	SILICON	HITACHI	U
	D902	1SS119	SILICON	HITACHI	US
	D902	1SS119	SILICON	HITACHI	UT
	D971	MTZ2.4JB	ZENER	ROHM	
	D972	1SS119	SILICON	HITACHI	
	D991	1SS119	SILICON	HITACHI	
	D992	1SS119	SILICON	HITACHI	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C701	QETB1CM-108N	1000MF	16V	ELECTRO	
	C702	QETB1CM-108N	1000MF	16V	ELECTRO	
	C703	QET41CM-227	220MF	16V	ELECTRO	
	C704	QET41CM-227	220MF	16V	ELECTRO	
	C705	QET41CM-476	47MF	16V	ELECTRO	
	C706	QCF11HP-223	0.022MF	50V	CERAMIC	
	C707	QETBOJM-227	220MF	6.3V	ELECTRO	
	C709	QCF11HP-223	0.022MF	50V	CERAMIC	
	C711	QFN81HJ-472	4700PF	50V	MYLAR	
	C712	QFN81HJ-472	4700PF	50V	MYLAR	
	C713	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C714	QCSB1HK-3R9	3.9PF	50V	CERAMIC	
	C715	QCBB1HK-471	470PF	50V	CERAMIC	
	C716	QET41EM-106	10MF	25V	ELECTRO	
	C717	QET41CM-476	47MF	16V	ELECTRO	
	C718	QCBB1HK-101	100PF	50V	CERAMIC	
	C719	QFN81HJ-183	0.018MF	50V	MYLAR	
	C721	QCS11HJ-470	47PF	50V	CERAMIC	
	C723	QCZ0202-155	1.5MF	25V	CERAMIC	
	C724	QFN81HJ-563	0.056MF	50V	MYLAR	
	C725	QFVB1HJ-564N	0.56MF	50V	T.FILM	
	C726	QET41EM-106	10MF	25V	ELECTRO	
	C731	QFN81HJ-183	0.018MF	50V	MYLAR	
	C732	QCBB1HK-271	270PF	50V	CERAMIC	
	C733	QFN81HJ-393	0.039MF	50V	MYLAR	
	C735	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C736	QFVB1HJ-224N	0.22MF	50V	T.FILM	
	C737	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C738	QET41CM-476	47MF	16V	ELECTRO	
	C761	QEN41HM-225	2.2MF	50V	NON POLE	

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C762	QETB1EM-226	22MF	25V	ELECTRO	
	C763	QETBOJM-227	220MF	6.3V	ELECTRO	
	C764	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C765	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C781	QFN81HJ-272	2700PF	50V	MYLAR	
	C782	QCBB1HK-101	100PF	50V	CERAMIC	
	C783	QEN41HM-225	2.2MF	50V	NON POLE	
	C784	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C785	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C791	QET41HM-475	4.7MF	50V	ELECTRO	
	C801	QCT26CH-151	150PF	50V	CERAMIC	
	C802	QCT26CH-101	100PF	50V	CERAMIC	
	C803	QFN81HJ-223	0.022MF	50V	MYLAR	
	C805	QCS11HJ-470	47PF	50V	CERAMIC	
	C806	QEN41HM-225	2.2MF	50V	NON POLE	
	C807	QFN81HJ-563	0.056MF	50V	MYLAR	
	C808	QET41CM-476	47MF	16V	ELECTRO	
	C809	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C810	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C811	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C812	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C813	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C841	QET41AM-107	100MF	10V	ELECTRO	
	C842	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C843	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C844	QET41EM-106	10MF	25V	ELECTRO	
	C845	QCBB1HK-101	100PF	50V	CERAMIC	
	C846	QFVB1HJ-105N	1MF	50V	T.FILM	
	C847	QFN81HJ-182	1800PF	50V	MYLAR	
	C848	QFVB1HJ-224N	0.22MF	50V	T.FILM	
	C849	QET41EM-106	10MF	25V	ELECTRO	
	C850	QETBOJM-227	220MF	6.3V	ELECTRO	
	C851	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C852	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C853	QCSB1HJ-100	10PF	50V	CERAMIC	
	C855	QFN41HJ-473	0.047MF	50V	MYLAR	
	C861	QCBB1HK-101	100PF	50V	CERAMIC	
	C862	QER61CM-107ZM	100MF	16V	ELECTRO	
	C863	QFN41HJ-473	0.047MF	50V	MYLAR	
	C864	QER51EM-106	10MF	25V	ELECTRO	
	C865	QET41HM-105	1MF	50V	ELECTRO	
	C872	QCZ0202-155	1.5MF	25V	CERAMIC	
	C873	QCT30CH-120	12PF	50V	CERAMIC	
	C874	QCT30CH-3R9	3.9PF	50V	CERAMIC	
	C875	QCS21HJ-5R0	5PF	50V	CERAMIC	G
	C875	QCS21HJ-5R0	5PF	50V	CERAMIC	GI
	C876	QCY21HK-392	3900PF	50V	CERAMIC	
	C877	QCS21HJ-180	18PF	50V	CERAMIC	G
	C877	QCS21HJ-180	18PF	50V	CERAMIC	GI
	C878	QCS21HJ-5R0	5PF	50V	CERAMIC	
	C880	QETBOJM-227	220MF	6.3V	ELECTRO	
	C881	QETBOJM-477	470MF	6.3V	ELECTRO	
	C883	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C884	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C885	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C886	QFVB1HJ-104N	0.1MF	50V	T.FILM	
	C887	QFN81HJ-681	680PF	50V	MYLAR	A
	C887	QFN81HJ-681	680PF	50V	MYLAR	BS
	C887	QFN81HJ-681	680PF	50V	MYLAR	EF
	C887	QFN81HJ-681	680PF	50V	MYLAR	EN
	C887	QFN81HJ-102	1000PF	50V	MYLAR	G
	C887	QFN81HJ-102	1000PF	50V	MYLAR	GI
	C887	QFN81HJ-681	680PF	50V	MYLAR	U
	C887	QFN81HJ-681	680PF	50V	MYLAR	US
	C887	QFN81HJ-681	680PF	50V	MYLAR	UT
	C888	QFN81HJ-681	680PF	50V	MYLAR	A
	C888	QFN81HJ-681	680PF	50V	MYLAR	BS
	C888	QFN81HJ-681	680PF	50V	MYLAR	EF
	C888	QFN81HJ-681	680PF	50V	MYLAR	EN
	C888	QFN81HJ-102	1000PF	50V	MYLAR	G
	C888	QFN81HJ-102	1000PF	50V	MYLAR	GI
	C888	QFN81HJ-681	680PF	50V	MYLAR	U
	C888	QFN81HJ-681	680PF	50V	MYLAR	US
	C888	QFN81HJ-681	680PF	50V	MYLAR	UT
	C889	QFN81HJ-681	680PF	50V	MYLAR	A
	C889	QFN81HJ-681	680PF	50V	MYLAR	BS
	C889	QFN81HJ-681	680PF	50V	MYLAR	EF
	C889	QFN81HJ-681	680PF	50V	MYLAR	EN
	C889	QFN81HJ-182	1800PF	50V	MYLAR	G
	C889	QFN81HJ-182	1800PF	50V	MYLAR	GI
	C889	QFN81HJ-681	680PF	50V	MYLAR	U
	C889	QFN81HJ-681	680PF	50V	MYLAR	US
	C889	QFN81HJ-681	680PF	50V	MYLAR	UT
	C890	QFN81HJ-681	680PF	50V	MYLAR	A
	C890	QFN81HJ-681	680PF	50V	MYLAR	BS
	C890	QFN81HJ-681	680PF	50V	MYLAR	EF
	C890	QFN81HJ-681	680PF	50V	MYLAR	EN
	C890	QFN81HJ-182	1800PF	50V	MYLAR	G
	C890	QFN81HJ-182	1800PF	50V	MYLAR	GI
	C890	QFN81HJ-681	680PF	50V	MYLAR	U

⚠ : SAFETY PARTS

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C890	QFN81HJ-681	680PF	50V	MYLAR	US
	C890	QFN81HJ-681	680PF	50V	MYLAR	UT
	C891	QCS11HJ-151	150PF	50V	CERAMIC	A
	C891	QCS11HJ-151	150PF	50V	CERAMIC	BS
	C891	QCS11HJ-151	150PF	50V	CERAMIC	EF
	C891	QCS11HJ-151	150PF	50V	CERAMIC	EN
	C891	QCS21HJ-121	120PF	50V	CERAMIC	G
	C891	QCS21HJ-121	120PF	50V	CERAMIC	GI
	C891	QCS11HJ-151	150PF	50V	CERAMIC	U
	C891	QCS11HJ-151	150PF	50V	CERAMIC	US
	C891	QCS11HJ-151	150PF	50V	CERAMIC	UT
	C892	QCS11HJ-151	150PF	50V	CERAMIC	A
	C892	QCS11HJ-151	150PF	50V	CERAMIC	BS
	C892	QCS11HJ-151	150PF	50V	CERAMIC	EF
	C892	QCS11HJ-151	150PF	50V	CERAMIC	EN
	C892	QCS21HJ-121	120PF	50V	CERAMIC	G
	C892	QCS21HJ-121	120PF	50V	CERAMIC	GI
	C892	QCS11HJ-151	150PF	50V	CERAMIC	U
	C892	QCS11HJ-151	150PF	50V	CERAMIC	US
	C892	QCS11HJ-151	150PF	50V	CERAMIC	UT
	C893	EEZ2505-226	22MF		ELECTRO	
	C894	EEZ2505-226	22MF		ELECTRO	
	C895	QFN81HJ-683	0.068MF	50V	MYLAR	
	C896	QFN81HJ-683	0.068MF	50V	MYLAR	
	C897	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C898	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C899	QCY21HK-122	1200PF	50V	CERAMIC	
	C901	QFN81HJ-123	0.012MF	50V	MYLAR	G
	C901	QFN81HJ-123	0.012MF	50V	MYLAR	GI
	C902	QFN81HJ-123	0.012MF	50V	MYLAR	G
	C902	QFN81HJ-123	0.012MF	50V	MYLAR	GI
	C907	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C911	QET41CM-107	100MF	16V	ELECTRO	
	C912	QET41CM-107	100MF	16V	ELECTRO	
	C913	QET41AM-107	100MF	10V	ELECTRO	
	C914	QET41CM-107	100MF	16V	ELECTRO	
	C915	QET41CM-107	100MF	16V	ELECTRO	
	C921	QCSB1HJ-680	68PF	50V	CERAMIC	U
	C921	QCSB1HJ-680	68PF	50V	CERAMIC	US
	C921	QCSB1HJ-680	68PF	50V	CERAMIC	UT
	C922	QCSB1HJ-680	68PF	50V	CERAMIC	U
	C922	QCSB1HJ-680	68PF	50V	CERAMIC	US
	C922	QCSB1HJ-680	68PF	50V	CERAMIC	UT
	C923	QCSB1HJ-680	68PF	50V	CERAMIC	U
	C923	QCSB1HJ-680	68PF	50V	CERAMIC	US
	C923	QCSB1HJ-680	68PF	50V	CERAMIC	UT
	C924	QCSB1HJ-680	68PF	50V	CERAMIC	U
	C924	QCSB1HJ-680	68PF	50V	CERAMIC	US
	C924	QCSB1HJ-680	68PF	50V	CERAMIC	UT
	C925	QCSB1HJ-680	68PF	50V	CERAMIC	U
	C925	QCSB1HJ-680	68PF	50V	CERAMIC	US
	C925	QCSB1HJ-680	68PF	50V	CERAMIC	UT
	C926	QCSB1HJ-680	68PF	50V	CERAMIC	U
	C926	QCSB1HJ-680	68PF	50V	CERAMIC	US
	C926	QCSB1HJ-680	68PF	50V	CERAMIC	UT
	C951	QCY21HK-103	0.01MF	50V	CERAMIC	A
	C951	QCY21HK-103	0.01MF	50V	CERAMIC	BS
	C951	QCY21HK-103	0.01MF	50V	CERAMIC	EF
	C951	QCY21HK-103	0.01MF	50V	CERAMIC	EN
	C951	QCY21HK-103	0.01MF	50V	CERAMIC	U
	C951	QCY21HK-103	0.01MF	50V	CERAMIC	US
	C951	QCY21HK-103	0.01MF	50V	CERAMIC	UT
	C952	QCY21HK-103	0.01MF	50V	CERAMIC	A
	C952	QCY21HK-103	0.01MF	50V	CERAMIC	BS
	C952	QCY21HK-103	0.01MF	50V	CERAMIC	EF
	C952	QCY21HK-103	0.01MF	50V	CERAMIC	EN
	C952	QCY21HK-103	0.01MF	50V	CERAMIC	U
	C952	QCY21HK-103	0.01MF	50V	CERAMIC	US
	C952	QCY21HK-103	0.01MF	50V	CERAMIC	UT
	C961	QCZ0202-155	1.5MF	25V	CERAMIC	
	C971	QER41CM-476	47MF	16V	ELECTRO	
	C972	QFN81HJ-103	0.01MF	50V	MYLAR	
	C973	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C974	QER41CM-476	47MF	16V	ELECTRO	
	C975	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C983	QFN41HJ-473	0.047MF	50V	MYLAR	
	C984	QCF11HP-473	0.047MF	50V	CERAMIC	A
	C984	QCF11HP-473	0.047MF	50V	CERAMIC	BS
	C984	QCF11HP-473	0.047MF	50V	CERAMIC	EF
	C984	QCF11HP-473	0.047MF	50V	CERAMIC	EN
	C984	QCF11HP-473	0.047MF	50V	CERAMIC	U
	C984	QCF11HP-473	0.047MF	50V	CERAMIC	US
	C984	QCF11HP-473	0.047MF	50V	CERAMIC	UT
	C987	QCZ0202-155	1.5MF	25V	CERAMIC	
	C992	QER51HM-475	4.7MF	50V	ELECTRO	
	C993	QER51HM-475	4.7MF	50V	ELECTRO	
	C994	QEK51HM-226	22MF	50V	ELECTRO	
	C995	QER40JM-107	100MF	6.3V	ELECTRO	
	C996	QER61AM-227ZM	220MF	10V	ELECTRO	
	C997	QCHB1EZ-223	0.022MF	25V	CERAMIC	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R701	PTH61G25AR4R7M			POSISTOR I	.M
⚠	R702	PTH61G25AR4R7M			POSISTOR I	.M
⚠	R703	QRZ0077-100	10	1/4W	FUSIBLE	
⚠	R704	QRZ0077-100	10	1/4W	FUSIBLE	
	R705	QRD167J-472	4.7K	1/6W	CARBON	
	R706	QRD167J-681	680	1/6W	CARBON	
	R708	QRD167J-472	4.7K	1/6W	CARBON	
	R709	QRD167J-122	1.2K	1/6W	CARBON	
	R710	QRD167J-121	120	1/6W	CARBON	
	R711	QRD167J-183	18K	1/6W	CARBON	
	R712	QRD167J-432	4.3K	1/6W	CARBON	
	R713	QRD167J-391	390	1/6W	CARBON	
	R714	QRD167J-221	220	1/6W	CARBON	
	R715	QRD167J-152	1.5K	1/6W	CARBON	
	R716	QRD167J-561	560	1/6W	CARBON	
	R717	QRD167J-431	430	1/6W	CARBON	
	R718	QRD167J-512	5.1K	1/6W	CARBON	
	R719	QRD167J-152	1.5K	1/6W	CARBON	
	R720	QRD167J-271	270	1/6W	CARBON	
	R721	QRD167J-471	470	1/6W	CARBON	
	R722	QRD167J-682	6.8K	1/6W	CARBON	
	R723	QRD167J-103	10K	1/6W	CARBON	
	R726	QRD167J-102	1K	1/6W	CARBON	
	R727	QRD167J-183	18K	1/6W	CARBON	
	R731	QRD167J-104	100K	1/6W	CARBON	
	R732	QRD167J-104	100K	1/6W	CARBON	
	R733	QRD167J-394	390K	1/6W	CARBON	
	R734	QRD167J-394	390K	1/6W	CARBON	
	R735	QRD167J-121	120	1/6W	CARBON	
	R736	QRD167J-182	1.8K	1/6W	CARBON	
	R737	QRD167J-681	680	1/6W	CARBON	
	R738	QRD167J-473	47K	1/6W	CARBON	
	R739	QRD167J-331	330	1/6W	CARBON	
	R740	QRD167J-183	18K	1/6W	CARBON	
	R741	QRD167J-103	10K	1/6W	CARBON	
	R742	QRD167J-104	100K	1/6W	CARBON	
	R743	QRD167J-474	470K	1/6W	CARBON	
	R744	QRD167J-562	5.6K	1/6W	CARBON	
	R745	QRD167J-184	180K	1/6W	CARBON	
	R746	QRD167J-183	18K	1/6W	CARBON	
	R747	QRD167J-473	47K	1/6W	CARBON	
	R748	QRD167J-471	470	1/6W	CARBON	
	R749	QRD167J-105	1M	1/6W	CARBON	
	R750	QRD167J-273	27K	1/6W	CARBON	
	R751	QRD167J-394	390K	1/6W	CARBON	
	R752	QRD167J-333	33K	1/6W	CARBON	
	R753	QRD167J-394	390K	1/6W	CARBON	
	R754	QRD167J-102	1K	1/6W	CARBON	
	R755	QRD167J-105	1M	1/6W	CARBON	
	R756	QRD167J-221	220	1/6W	CARBON	
	R757	QRD167J-105	1M	1/6W	CARBON	
	R758	QRD167J-105	1M	1/6W	CARBON	
	R759	QRD167J-104	100K	1/6W	CARBON	
	R760	QRD167J-332	3.3K	1/6W	CARBON	
	R761	QRD167J-104	100K	1/6W	CARBON	
	R762	QRD167J-682	6.8K	1/6W	CARBON	
	R763	QRD167J-562	5.6K	1/6W	CARBON	
	R764	QRD167J-183	18K	1/6W	CARBON	
	R781	QRD167J-434	430K	1/6W	CARBON	
	R782	QRD167J-274	270K	1/6W	CARBON	
	R783	QRD167J-203	20K	1/6W	CARBON	
	R784	QRD167J-224	220K	1/6W	CARBON	
	R785	QRD167J-562	5.6K	1/6W	CARBON	
	R786	QRD167J-392	3.9K	1/6W	CARBON	
	R788	QRD167J-103	10K	1/6W	CARBON	
	R789	QRD167J-102	1K	1/6W	CARBON	
	R790	QRD167J-471	470	1/6W	CARBON	
	R791	QRD167J-683	68K	1/6W	CARBON	
	R792	QRD167J-183	18K	1/6W	CARBON	
	R793	QRD167J-183	18K	1/6W	CARBON	
	R794	QRD167J-221	220	1/6W	CARBON	
	R796	QRD167J-472	4.7K	1/6W	CARBON	
	R797	QRD167J-472	4.7K	1/6W	CARBON	
	R798	QRD167J-472	4.7K	1/6W	CARBON	
⚠	R799	QRZ0077-100	10	1/4W	FUSIBLE	
⚠	R800	QRZ0077-100	10	1/4W	FUSIBLE	
	R801	QRD167J-474	470K	1/6W	CARBON	
	R802	QRD167J-474	470K	1/6W	CARBON	
	R803	QRD167J-823	82K	1/6W	CARBON	
	R804	QRD167J-221	220	1/6W	CARBON	
	R805	QRD167J-683	68K	1/6W	CARBON	
	R806	QRD167J-123	12K	1/6W	CARBON	
	R807	QRD167J-152	1.5K	1/6W	CARBON	
	R808	QRD167J-2R2	2.2	1/6W	CARBON	
	R810	QRD167J-684	680K	1/6W	CARBON	
	R811	QRD167J-513	51K	1/6W	CARBON	
	R812	QRD167J-513	51K	1/6W	CARBON	
	R813	QRD167J-683	68K	1/6W	CARBON	
	R814	QRD167J-683	68K	1/6W	CARBON	
	R815	QRD167J-221	220	1/6W	CARBON	

⚠ : SAFETY PARTS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R821	QRD167J-563	56K	1/6W	CARBON	
	R822	QRD167J-563	56K	1/6W	CARBON	
	R823	QRD167J-394	390K	1/6W	CARBON	
	R824	QRD167J-681	680	1/6W	CARBON	
	R825	QVPA601-202A	2K		VARIABLE	
	R826	QRD167J-122	1.2K	1/6W	CARBON	
	R827	QRD167J-334	330K	1/6W	CARBON	
	R828	QRD167J-512	5.1K	1/6W	CARBON	
	R829	QVPA601-154A	150K		VARIABLE	
	R830	QRD167J-223	22K	1/6W	CARBON	
	R831	QRD167J-682	6.8K	1/6W	CARBON	
	R832	QRD167J-103	10K	1/6W	CARBON	
	R833	QRD167J-562	5.6K	1/6W	CARBON	
	R834	QRD167J-562	5.6K	1/6W	CARBON	
	R835	QRD167J-562	5.6K	1/6W	CARBON	
	R836	QRD167J-562	5.6K	1/6W	CARBON	
	R837	QRD167J-183	18K	1/6W	CARBON	
	R839	QRD167J-103	10K	1/6W	CARBON	
	R840	QRD167J-154	150K	1/6W	CARBON	
	R841	QRD167J-103	10K	1/6W	CARBON	
	R842	QRD167J-303	30K	1/6W	CARBON	
	R843	QRD167J-434	430K	1/6W	CARBON	
	R844	QRD167J-434	430K	1/6W	CARBON	
	R845	QRD167J-103	10K	1/6W	CARBON	
	R846	QRD167J-184	180K	1/6W	CARBON	
	R847	QRD167J-104	100K	1/6W	CARBON	
	R848	QRD167J-104	100K	1/6W	CARBON	
	R849	QRD167J-681	680	1/6W	CARBON	
	R850	QRD167J-183	18K	1/6W	CARBON	
	R852	QRD167J-102	1K	1/6W	CARBON	
	R853	QRD167J-562	5.6K	1/6W	CARBON	
	R857	QRD167J-221	220	1/6W	CARBON	
	R858	QRD167J-562	5.6K	1/6W	CARBON	
	R859	QRD167J-183	18K	1/6W	CARBON	
	R861	QRD167J-182	1.8K	1/6W	CARBON	
	R862	QRD167J-221	220	1/6W	CARBON	
	R863	QRD167J-184	180K	1/6W	CARBON	
	R864	QRD167J-393	39K	1/6W	CARBON	
	R865	QVPA601-104A	100K		VARIABLE	
	R866	QRD167J-224	220K	1/6W	CARBON	
	R867	QRD167J-182	1.8K	1/6W	CARBON	
	R868	QRD167J-122	1.2K	1/6W	CARBON	
	R869	QRD167J-822	8.2K	1/6W	CARBON	
	R870	QRD167J-822	8.2K	1/6W	CARBON	
	R871	QRD167J-821	820	1/6W	CARBON	
	R872	QRD167J-182	1.8K	1/6W	CARBON	
	R873	QRD167J-101	100	1/6W	CARBON	
	R874	QRD167J-561	560	1/6W	CARBON	
	R875	QRD167J-682	6.8K	1/6W	CARBON	
	R876	QRD167J-682	6.8K	1/6W	CARBON	
	R877	QRD167J-102	1K	1/6W	CARBON	
	R879	QRD167J-102	1K	1/6W	CARBON	
	R880	QRD167J-102	1K	1/6W	CARBON	
	R881	QRD167J-103	10K	1/6W	CARBON	
	R882	QRD161J-272	2.7K	1/6W	CARBON	
	R883	QRD167J-102	1K	1/6W	CARBON	
	R884	QRD167J-271	270	1/6W	CARBON	
	R885	QRD167J-103	10K	1/6W	CARBON	
	R886	QRD167J-562	5.6K	1/6W	CARBON	
	R887	QRD167J-472	4.7K	1/6W	CARBON	
	R888	QRD167J-822	8.2K	1/6W	CARBON	
	R889	QRD167J-103	10K	1/6W	CARBON	
	R891	QRD167J-561	560	1/6W	CARBON	
	R892	QRD167J-561	560	1/6W	CARBON	A
	R892	QRD167J-561	560	1/6W	CARBON	BS
	R892	QRD167J-561	560	1/6W	CARBON	EF
	R892	QRD167J-561	560	1/6W	CARBON	EN
	R892	QRD167J-222	2.2K	1/6W	CARBON	G
	R892	QRD167J-222	2.2K	1/6W	CARBON	GI
	R892	QRD167J-561	560	1/6W	CARBON	U
	R892	QRD167J-561	560	1/6W	CARBON	US
	R892	QRD167J-561	560	1/6W	CARBON	UT
	R893	QRD167J-561	560	1/6W	CARBON	
	R894	QRD167J-561	560	1/6W	CARBON	
	R895	QRD167J-472	4.7K	1/6W	CARBON	
	R896	QRD167J-270	27	1/6W	CARBON	A
	R896	QRD167J-270	27	1/6W	CARBON	BS
	R896	QRD167J-270	27	1/6W	CARBON	EF
	R896	QRD167J-270	27	1/6W	CARBON	EN
	R896	QRD167J-560	56	1/6W	CARBON	G
	R896	QRD167J-560	56	1/6W	CARBON	GI
	R896	QRD167J-270	27	1/6W	CARBON	U
	R896	QRD167J-270	27	1/6W	CARBON	US
	R896	QRD167J-270	27	1/6W	CARBON	UT
	R897	QRD167J-181	180	1/6W	CARBON	
	R898	QRD167J-181	180	1/6W	CARBON	
	R899	QRD167J-273	27K	1/6W	CARBON	
	R900	QRD167J-273	27K	1/6W	CARBON	
	R901	QRD167J-273	27K	1/6W	CARBON	
	R902	QRD167J-273	27K	1/6W	CARBON	

⚠ : SAFETY PARTS

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R903	QRD167J-562	5.6K 1/6W CARBON	
	R904	QRD167J-562	5.6K 1/6W CARBON	
	R905	QRD167J-822	8.2K 1/6W CARBON	
	R906	QRD167J-822	8.2K 1/6W CARBON	
	R907	QRD167J-273	27K 1/6W CARBON	
	R908	QRD167J-273	27K 1/6W CARBON	
	R909	QRD167J-561	560 1/6W CARBON	
	R910	QRD167J-561	560 1/6W CARBON	
	R911	QRD167J-221	220 1/6W CARBON	A
	R911	QRD167J-221	220 1/6W CARBON	BS
	R911	QRD167J-221	220 1/6W CARBON	EF
	R911	QRD167J-221	220 1/6W CARBON	EN
	R911	QRD167J-181	180 1/6W CARBON	G
	R911	QRD167J-181	180 1/6W CARBON	GI
	R911	QRD167J-221	220 1/6W CARBON	U
	R911	QRD167J-221	220 1/6W CARBON	US
	R911	QRD167J-221	220 1/6W CARBON	UT
	R912	QRD167J-221	220 1/6W CARBON	A
	R912	QRD167J-221	220 1/6W CARBON	BS
	R912	QRD167J-221	220 1/6W CARBON	EF
	R912	QRD167J-221	220 1/6W CARBON	EN
	R912	QRD167J-181	180 1/6W CARBON	G
	R912	QRD167J-181	180 1/6W CARBON	GI
	R912	QRD167J-221	220 1/6W CARBON	U
	R912	QRD167J-221	220 1/6W CARBON	US
	R912	QRD167J-221	220 1/6W CARBON	UT
	R913	QRD167J-153	15K 1/6W CARBON	
	R914	QRD167J-153	15K 1/6W CARBON	
	R925	QRD167J-102	1K 1/6W CARBON	U
	R925	QRD167J-102	1K 1/6W CARBON	US
	R925	QRD167J-102	1K 1/6W CARBON	UT
	R926	QRD167J-102	1K 1/6W CARBON	U
	R926	QRD167J-102	1K 1/6W CARBON	US
	R926	QRD167J-102	1K 1/6W CARBON	UT
	R927	QRD167J-102	1K 1/6W CARBON	U
	R927	QRD167J-102	1K 1/6W CARBON	US
	R927	QRD167J-102	1K 1/6W CARBON	UT
	R941	QRD167J-152	1.5K 1/6W CARBON	
	R942	QRD167J-512	5.1K 1/6W CARBON	
	R943	QRD167J-201	200 1/6W CARBON	
	R945	QRD167J-104	100K 1/6W CARBON	
	R946	QRD167J-104	100K 1/6W CARBON	
	R947	QRD167J-392	3.9K 1/6W CARBON	
	R948	QRD167J-392	3.9K 1/6W CARBON	
	R949	QRD167J-684	680K 1/6W CARBON	
	R950	QRD167J-154	150K 1/6W CARBON	
	R951	QRD167J-200	20 1/6W CARBON	
	R953	QRD167J-200	20 1/6W CARBON	
	R954	QRD121J-120	12 1/2W CARBON	
	R961	QRD167J-680	68 1/6W CARBON	U
	R961	QRD167J-680	68 1/6W CARBON	US
	R961	QRD167J-680	68 1/6W CARBON	UT
	R962	QRD167J-680	68 1/6W CARBON	U
	R962	QRD167J-680	68 1/6W CARBON	US
	R962	QRD167J-680	68 1/6W CARBON	UT
	R963	QRD167J-680	68 1/6W CARBON	U
	R963	QRD167J-680	68 1/6W CARBON	US
	R963	QRD167J-680	68 1/6W CARBON	UT
	R964	QRD167J-680	68 1/6W CARBON	U
	R964	QRD167J-680	68 1/6W CARBON	US
	R964	QRD167J-680	68 1/6W CARBON	UT
	R965	QRD167J-680	68 1/6W CARBON	U
	R965	QRD167J-680	68 1/6W CARBON	US
	R965	QRD167J-680	68 1/6W CARBON	UT
	R966	QRD167J-680	68 1/6W CARBON	U
	R966	QRD167J-680	68 1/6W CARBON	US
	R966	QRD167J-680	68 1/6W CARBON	UT
	R967	QRD167J-103	10K 1/6W CARBON	
	R971	QRD167J-220	22 1/6W CARBON	
	R972	QRD167J-220	22 1/6W CARBON	
	R973	QRD167J-102	1K 1/6W CARBON	
	R974	QRD167J-105	1M 1/6W CARBON	
	R975	QRD167J-331	330 1/6W CARBON	
	R976	QRD167J-183	18K 1/6W CARBON	
	R977	QRD167J-102	1K 1/6W CARBON	
	R978	QRD167J-103	10K 1/6W CARBON	
	R979	QRD167J-103	10K 1/6W CARBON	
	R980	QRD167J-104	100K 1/6W CARBON	
	R981	QRD167J-222	2.2K 1/6W CARBON	
	R982	QRD167J-910	91 1/6W CARBON	
	R991	QRD167J-471	470 1/6W CARBON	
	R992	QRD167J-473	47K 1/6W CARBON	
	R994	QRD167J-103	10K 1/6W CARBON	
	R995	QRD167J-472	4.7K 1/6W CARBON	
	R996	QRD167J-105	1M 1/6W CARBON	
	R997	QRD167J-473	47K 1/6W CARBON	
	R999	QRD167J-472	4.7K 1/6W CARBON	
	RA991	QRB045J-473M	47K 1/8W R.NETWORK	

⚠ : SAFETY PARTS

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E3400-420	FELT SPACER	
		E308198-001	FL. HOLDER	
	J701	EMV7141-013M	CONNECTOR(13PIN)	
	K801	ENZ8101-007	FERRITE BEAS	G
	K801	ENZ8101-007	FERRITE BEAS	GI
	P801	EMV7144-015	CONNECTOR(15PIN)	
	P802	EMV5109-006A	PLUG ASSY(6PIN)	
	P803	EMV5109-005A	PLUG ASSY(5PIN)	
	P901	EMV7123-025	CONNECTOR(25PIN)	
	P961	EMV7127-007	CONNECTOR(7PIN)	U
	P961	EMV7127-007	CONNECTOR(7PIN)	US
	P961	EMV7127-007	CONNECTOR(7PIN)	UT
	P981	GP1F32T	OPTICAL JACK	
	P991	EMV7123-025R	CONNECTOR(25PIN)	
	S971	ESP0001-018	TACT SWITCH(1)	
	S972	ESP0001-018	TACT SWITCH(3)	
	S973	ESP0001-018	TACT SWITCH(7)	
	S974	ESP0001-018	TACT SWITCH(9)	
	S975	ESP0001-018	TACT SWITCH(4)	
	S976	ESP0001-018	TACT SWITCH(2)	
	S977	ESP0001-018	TACT SWITCH(5)	
	S978	ESP0001-018	TACT SWITCH(10)	
	S979	ESP0001-018	TACT SWITCH(6)	
	S980	ESP0001-018	TACT SWITCH(8)	
	S981	ESP0001-018	TACT SWITCH(PROGRAM)	
	S982	ESP0001-018	TACT SWITCH(⏭)	
	S983	ESP0001-018	TACT SWITCH(EDIT MODE)	
	S984	ESP0001-018	TACT SWITCH(⏮)	
	S985	ESP0001-018	TACT SWITCH(SIDE A/B)	
	S986	ESP0001-018	TACT SWITCH(TIME)	
	S987	ESP0001-018	TACT SWITCH(FADE MODE)	
	S988	ESP0001-018	TACT SWITCH(REPEAT ALL/1)	
	S989	ESP0001-018	TACT SWITCH(RANDOM)	
	S990	ESP0001-018	TACT SWITCH(DISPLAY)	
	S991	ESP0001-018	TACT SWITCH(+10)	
	S992	ESP0001-018	TACT SWITCH(PLAY/PAUSE)	
	S993	ESP0001-018	TACT SWITCH(OPEN/CLOSE)	
	S994	ESP0001-018	TACT SWITCH(CANCEL)	
	S995	ESP0001-018	TACT SWITCH(STOP/CLEAR)	
	X841	ECX0169-344EA	RESONATOR	
	CF991	ECX0004-194KM	RESONATOR	
⚠	CP701	ICP-N5	I.C. PROTECTOR	
	EP701	E70859-001	EARTH PLATE	
	EP702	E70859-001	EARTH PLATE	
	EP703	E70859-001	EARTH PLATE	
	EP704	E70859-001	EARTH PLATE	
	FL991	ELU0001-140	FL TUBE	

⚠ : SAFETY PARTS

L-MXG9BK

JVC
VICTOR COMPANY OF JAPAN, LIMITED
AUDIO DIVISION, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

(No.20436)

Printed in Japan
9306 (V)